The Mining Journal

RAILWAY AND COMMERCIAL GAZETTE.

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 681.—Vol. XVIII. LONDON, SATURDAY, SEPTEMBER 9, 1848. [Price 6d.

Stannaries of Cornwall—In the Vice-Warden's Court.

PURSUANT to a DECREE of the VICE-WARDEN'S COURT, made in the consolidated causes of

NORWAY and ANOTHER *v.* BELLING,
HAWKEN *v.* DAME,

The creditors, in respect of WHEAL KEKEWICH MINE, in the parish of LANIVET, within the said Stannaries, are, on or before the 20th day of Sept. inst., to come in and PROVE their DEBTS before the Registrar of the said Court, at his office, in Truro; or, in default thereof, they will be excluded the said Decree.

Dated Registrar's Office, Truro, Sept. 5, 1848.

STEAM-ENGINES, MACHINERY, ENGINEERING TOOLS, &c.
BRISTOL IRON-WORKS, ST. PHILIP'S.

MR. EDWIN NAISH will SELL BY AUCTION, on Monday, Sept. 18, 1848, on the premises, as above, TWO substantial and highly-finished independent non-condensing STEAM-ENGINES, of 20-horse power each, with boiler and pipe fittings, complete in all respects for separate erection, with the exception of the mere boiler shells.

ONE independent non-condensing STEAM-ENGINE, of 10-horse power, in all respects similarly fitted and furnished.

ONE 4-ton PIER, or WHARF, CRANE, with wrought-iron post and timber-jib, 18 ft. radius, and 16 feet high, with cast-iron foundation cylinder and bed-plate, complete in all respects for erection.

ONE 10½-inch self-acting BORING BAR, with 2½-inch screw, to bore 11 feet in length—a very capital tool.

A revolving double chamber BLACKING-MILL, with driving gear, shafting, &c., complete—equal to produce almost any quantity of founders' coal dust of the first quality.

A powerful lift FORGE HAMMER, with wrought-iron helve and screw standards, fitted into a cast-iron bed-plate, very complete, and applicable to almost any site.

ONE 3-ton and one 8-ton wrought-iron CUPOLAS, with blow-pipes and blast boxes, complete.

TWO bench DRILLING MACHINES, and an assortment of slide rests, steel and other tools, several lots of useful castings and foundry flasks, nearly 2000 crab-tree cogs, a large number of valuable patterns, various lots of pine and other timber in balk, plank and board, with a quantity of building materials, a double-purchase crab winch, capital iron waggon, pumping crank and shaft, several lots of shafting, with pulleys and wheel gearing, 10-ton lifting-jack, and a series of other matters and materials, alike interesting to the founder, engineer, and manufacturer.

Sale to commence precisely at Eleven o'clock, at which hour a punctual attendance is requested, as, in order to accommodate buyers from a distance, a large number of most valuable lots have been condensed into one day's sale.

Catalogues of the whole, with orders to view, may be obtained, free of expense, at the offices of the auctioneer, 7, North-street, Bristol, six days previous to the sale.

VALUABLE MINING MATERIALS FOR SALE.

MESSRS. TREVENA & PRYOR will SELL BY AUCTION, on Tuesday, the 19th inst., by Ten o'clock in the forenoon, at WEST BASSET MINE, in the parish of ILLOGAN, the following

MINING MATERIALS—viz.:

1 36-inch cylinder ENGINE, with boiler, about 10 tons.
Capstan, shears, and 2 horse-whims; capstan and whim-ropes and chain.
3 10-inch plunger poles.
1 9, 10, and 12-inch H-pieces, with top door-pieces, &c.
52 Fathoms of 11-inch, and 35 fathoms of 9 and 10-inch pumps.
1 8, 9, and 10-inch working-pieces, and 1 10-inch, 2 11-inch, and 2 7-inch clack door-pieces, with windbores to suit the above lifts.
90 Fathoms of 9-inch rods, with plates and pins to match.
100 Fathoms of ladders and shaft casings.

Miners and smiths' tools, bellows, anvil and screw tackle, iron rods, shaft rollers, a quantity of timber, and sundry other useful articles. Also, the

COUNTING-HOUSE FURNITURE.

For viewing the same, apply to the agent on the mine; and for further particulars, to Capt. William Richards, Redruth.—Dated Sept. 6, 1848.

TO CAPITALISTS—PROFITABLE INVESTMENT.

MESSRS. BELL & WATSON are instructed to SELL, BY AUCTION, without reserve, at the GEORGE INN, PILGRIM-STREET, NEWCASTLE-UPON-TYNE, on Tuesday, the 26th Sept. next, at One for Two o'clock in the afternoon (by order of the mortgagees, under an absolute power of sale, unless previously disposed of by private contract, of which due notice will be given), the WHOLE of those rich and extensive LEAD MINES, or VEINS of LEAD ORE, lying or being within or under a certain portion of ground, part of the manor of Alston Moor, commonly called

THE GALLIGILL SYKE LEAD MINES,

held and subject to the terms of a lease under the Commissioners of Greenwich Hospital, comprising the MINES under and above the ground, FIXTURES and MATERIALS, CRUSHING-MILL, DRESSING or WASHING MACHINE, TUBS, WAGGONS, WORKSHOPS, RAILWAY, and every other requisite for the produce and sale of lead ore.

These mines have been opened out during the last six years, and but partially worked, and the late proprietors have incurred very considerable expense in laying out the mines, and preparing them for the development of their valuable and exhaustless resources.

The supply of ore has, during the above period, been annually increasing; and, in the ordinary and profitable progress of working, will be for years to come capable of increased extension—during the last year producing a quantity only exceeded by three out of the numerous mines in this extensive and well-known mining district.

The quality of the ore of these mines ranks with the best, producing an unusually large portion of *silver*; and the mine has been, and is now, in profitable operation, and promising increased and large returns, by its further and more vigorous working.

Messrs. Bell & Watson are also authorised to TREAT for the SALE of the said MINES by PRIVATE CONTRACT, and will receive any proposal or communication, with that view, until the 19th of Sept. next, but not beyond that time, so as, in case of sale, to give sufficient notice to the public.

Messrs. Bell & Watson are further instructed to SELL, at the same time and place, those extensive MINES, known by the name of the GALLIGILL BENTS MINES, contiguous to the above, and subject to the same terms of lease. These mines have not been worked, and, from their extent, richness, and convenience of situation, afford a certain prospect of being profitably worked.

Further particulars may be had of, and all communications are requested to be addressed to, Messrs. Bell and Watson, auctioneers, Bank-buildings, Mosley-street, Newcastle-upon-Tyne.

The mines may be viewed on application to Mr. John Lathern, New Shield, near Alston.—Newcastle-upon-Tyne, August 24, 1848.

"IRELAND."—TO CAPITALISTS.

AUCTION OF THE INTEREST IN THE LEASE OF THE KILBRICKEN SILVER-LEAD MINES, AND ALL THE VALUABLE MACHINERY THEREON.

MR. JAMES MARSHALL, of Limerick, has received peremptory instructions to SELL, BY UNRESERVED AUCTION, at the MINES—within three miles of the port of Clare Castle, five of Ennis, three of Newmarket-on-Fergus, and 14 of Limerick, on Saturday, the 30th of September, at one o'clock, this very

DESIRABLE PROPERTY.

It is proposed that the interest in the lease of the mine (which is held for an unexpired period of 19 years, at 1-10th of the royalty), together with the MACHINERY, TOOLS, &c., be offered in one lot; and in the event of no competition, be separated, and the machinery sold by the piece; in either way, it will be well worth the attendance of manufacturers or mining companies, as, by the catalogue, it will be seen that the various lots are of the most costly description, and only two years in use.

There is a great facility for shipment, as the port of Clare is within three miles of the mine, over a good level road.

The ore is of the most valuable description—realising about 120 ounces of silver to the ton; and the mine, when stopped for the erection of more powerful machinery (which has been erected, but has never gone to work), was making large profits. This sale only takes place in consequence of many of the shareholders being unable to find the necessary funds to put the new machinery to work.

THE MACHINERY CONSISTS OF—

1 66-inch cylinder DRAFT ENGINE, with 9-ton boiler—complete.
1 27-inch DOUBLE-ACTING ENGINE, with sweep-rods, pumping and winding gear, and fly-wheel, with three boilers, of about 6 tons each.
1 20-inch cylinder DRAFT ENGINE, single action, with one boiler of 7 tons, and one of 1½ ton.
1 23-fathom 21-inch plunger lift; 1 23-fathom 17-inch drawing lift—complete.
1 20-fathom 16-inch ditto ditto; 1 16-fathom 12-inch ditto ditto—complete.
2 9-fathom 8-inch drawing lifts; 1 16-fathom 8-inch ditto ditto—complete.
1 7-fathom 10-inch ditto ditto—complete.

A quantity of main and flat-rods, whims, chains, kibbles, and other machinery, which it would be impossible to particularise in the limits of an advertisement, but will be found to consist of every possible requisite for the effectually working of the mine, which will be catalogued.

Terms—Cash: a deposit of 25 per cent. to be paid on each lot, and the remainder of the purchase-money within three weeks of the time of sale. All lots must be paid for and removed at the expense and risk of the purchaser, within three weeks of the time of sale (except the large engine, for which two months will be given for the removal), otherwise the deposit will be forfeited, and vendors have the privilege of again selling the lot or lots. The purchaser pays the auctioneer's commission of 5 per cent., in addition to their biddings.

Catalogues, plans of the mines, with sections, can be seen, and all other information obtained, on application at the secretary's office, 23, King-street, St. James's, London, or of the auctioneer, James Marshall, 96, George-street, Limerick.—Catalogues can also be had at the office of the *Mining Journal*, 26, Fleet-street, London.

ROYAL COLLEGE OF CHEMISTRY,
HANOVER-SQUARE AND OXFORD-STREET, LONDON.

The PRACTICAL COURSE of INSTRUCTION in this INSTITUTION is under the direction of Dr. A. W. Hofmann and assistants.

The NEXT SESSION will COMMENCE on MONDAY, the 2d of OCTOBER, and end on the 28th of February, 1849.

The fee for students working every day during the session is		£15	0	0
" " "	four days in the week	12	0	0
" " "	three days ditto	10	0	0
" " "	two days ditto	7	0	0
" " "	one day ditto	5	0	0

Hours of Attendance from Nine to Five.

Further particulars may be obtained on application to the secretary.

WILLIAM JOHNSON, Secretary.

STEAM TO INDIA AND CHINA, via EGYPT.—Regular MONTHLY MAIL (steam conveyance) for PASSENGERS and LIGHT GOODS to CEYLON, MADRAS, CALCUTTA, PENANG, SINGAPORE, and HONG-KONG.

THE PENINSULAR AND ORIENTAL STEAM NAVIGATION COMPANY BOOK PASSENGERS and RECEIVE GOODS and PARCELS for the ABOVE PORTS by their steamers—starting from Southampton on the 20th of every month; and from Suez on or about the 10th of every month.

BOMBAY.—Passengers for Bombay can proceed by this company's steamers of the 29th of the month, to Malta, thence to Alexandria by her Majesty's steamers, and from Suez by the Honourable East India Company's steamers.

MEDITERRANEAN.—Malta—On the 20th and 29th of every month. Constantinople—On the 29th of the month. Alexandria—On the 20th of the month.

SPAIN AND PORTUGAL.—Vigo, Oporto, Lisbon, Cadiz, and Gibraltar, on the 7th, 17th, and 27th of the month.

ITALY.—Genoa, Leghorn, and Civita Vecchia, at intervals of six weeks. The next vessel will leave Southampton at Two P.M. on Saturday, the 7th of October, 1848.

For plans of the vessels, rates of passage-money, and to secure passages, and ship cargo, apply at the company's offices, No. 122, Leadenhall-street, London; and 57, High-street, Southampton.

ASSAYING.—Mr. R. F. MUSHET (son of the late eminent metallurgist, David Mushet, Esq.) ASSAYS IRON ORES and IRONSTONES, of all descriptions, at the charge of 7s. for each assay—giving the metallic contents of each ore with perfect accuracy.—Address: Coleford, Gloucestershire.

ASSAYING AND ANALYSIS.—Mr. MITCHELL begs to inform the MANAGERS, &c., of MINES, SMELTING-WORKS, and MANUFACTORIES, that he still continues to CONDUCT ASSAYS and ANALYSES of all PRODUCTS, metallurgical and manufacturing, at his LABORATORY,

23, *HAWLEY-ROAD, KENTISH TOWN, LONDON,*

to which address communications are to be forwarded.—Instruction in all branches of assaying and analysis as usual.

VENTILATION OF COAL MINES—BIRAM'S PATENT ANEMOMETER.—This INSTRUMENT has now been SUCCESSFULLY EMPLOYED by many eminent engineers, to whom reference can be given.

For particulars, apply either to the inventor, B. Biram, Esq., Wentworth, near Rotherham; or to the maker, John Davis, Derby, manufacturer of miners' dials, clinometers, safety-lamps, and all kinds of instruments appertaining to the engineer, are made and kept in stock.—Repairs promptly attended to. J. DAVIS, Irongate, Derby.

THE PATENT SAFETY FUSE, FOR BLASTING ROCKS IN MINES, QUARRIES, AND FOR SUBMARINE OPERATIONS.—This article affords the SAFEST, CHEAPEST, and most EXPEDITIOUS MODE of effecting this very hazardous operation. From many testimonies to its usefulness with which the manufacturers have been favoured from every part of the kingdom, they select the following letter, recently received from John Taylor, Esq., F.R.S., &c.:—"I am very glad to hear that my recommendations have been of any service to you; they have been given from a thorough conviction of the great usefulness of the Safety Fuse; and I am quite willing that you should employ my name as evidence of this."

Manufactured and sold by the Patentees, BICKFORD, SMITH, and DAVEY, Camborne, Cornwall.

FOURDRINIER'S PATENT SAFETY APPARATUS, for PREVENTING ACCIDENTS IN MINES AND OTHER PLACES, WHEN THE ROPE OR CHAIN BREAKS.

By the ADOPTION of this INVENTION the LIVES of the WORKING MINERS may be PRESERVED, and the PROPERTY of the MINE OWNERS PROTECTED from the serious consequences of either of the following accidents—viz.:

1. From the men, or the load, being precipitated to the bottom of the shaft when the rope or chain breaks: in this case the apparatus is *self-acting*.
2. From either the men, or load, being drawn over the pulley: in this case, also, the apparatus is *self-acting*.
3. From the fearful consequences to men or load of a "whirl," or run: in this case the result is equally *certain*.

A COAL PIT, with the SAFETY APPARATUS ATTACHED to the CAGE, is daily at WORK near BURSLEM, in the STAFFORDSHIRE POTTERIES.

To inspect the apparatus, or to obtain any further information, application may be made to Mr. Edward N. Fourdrinier (the patentee), Cheddleton, near Leek, Staffordshire; or to Mr. Joseph Fourdrinier, 9, College-place, Camden Town, London—who are prepared to GRANT LICENSES for the USE of the PATENT.

UNDER BRITISH and FOREIGN LETTERS PATENT.—Valuable INVESTMENT, by partnership or otherwise.—ABSORBENT and SOFT STONE INDURATED, rendered impervious to wet, frost, vermin, &c., and polished as high as marble, for all purposes.—CHALK, SAND, PLASTER, WOOD, CARTON-ROOF SHEETING, &c., treated equally as successful.

Established works, *à la Maladrérie*, near Caen, and at Tunbridge Wells, where orders are executed much cheaper than other stone, &c.—Hutchison and Co.'s offices, East Temple Chambers, 2, Whitefriars-street, Fleet-street, London.

N.B.—LICENCES GRANTED.

PATENT GALVANISED IRON and WIRE ROPE WORKS, *MILLWALL, POPLAR.*

ANDREW SMITH begs to inform the Mining, Railway, and Shipping interests, that he has obtained a PATENT for an IMPROVED METHOD of GALVANISING IRON, producing a much superior article at a considerable saving in cost—the improved process for galvanising wire rope, adding only £10 per ton instead of £20, under the ordinary processes. The rope is extensively used in damp situations, for mining and railway purposes, and for ships' standing rigging.

PATENT IMPROVEMENTS IN CHRONOMETERS, WATCHES AND CLOCKS.—E. J. DENT, 82, Strand, and 33, Cockspur-street, watch and clock maker, BY APPOINTMENT, to the Queen and his Royal Highness Prince Albert, begs to acquaint the public, that the manufacture of his chronometers, watches, and clocks, is secured by three separate patents, respectively granted in 1836, 1840, 1842. Silver lever watches, jewelled in four holes, 6 gs. each; in gold cases, from £8 to £10 extra. Gold horizontal watches, with gold dials, from 8 gs. to 12 gs. each.

DENT'S PATENT DIPLIEDOSCOPE,

or Meridian Instrument, is now ready for delivery.—Pamphlets containing a description and directions for its use 1s. each, but to customers gratis.

PATENT ALKALI COMPANY'S IRON PAINT.—This PAINT is the PRODUCT of a PATENT PROCESS, and possesses PECULIAR and VALUABLE PROPERTIES, not otherwise attainable.

Its colour (as at present produced) is a rich *purple-brown*. It is perfectly free from the deleterious qualities of white lead.

It surpasses all other paints ever yet discovered, in point of *durability* and *economy*. Two coats of this paint are more than equal to three of any other description.

From its chemical composition, it is pre-eminently adapted for covering *iron*; also *wood*, and *stuccoed*, or *brick buildings*. The process by which the base of this paint is produced, makes it impossible that any change should take place in its composition from atmospheric influence. Its identity with iron secures it from galvanic action, so fatal to the durability of lead and other paints on iron work.

It has been exposed on shipping to the action of sea-water, and of the sulphuretted hydrogen, so prevalent in sea-ports and tidal harbours, for more than three years, without change.

Its *cheapness* and *strength* render it peculiarly suitable for *iron bridges*, *roofs*, and *railings*, *farm buildings*, and *shipping*. It will also cover creosoted timber.

Price, by the ton, £25, delivered in London, exclusive of packages.

Agents will be appointed for the principal towns in the United Kingdom; in the mean time, orders may be addressed to the offices of the company, No. 20, Fenchurch-street, London. JOHN A. WEST, Secretary.

THE PATENT OFFICE AND DESIGNS REGISTRY,
No. 210, STRAND, LONDON.

INVENTORS will receive (gratis), on application, the OFFICIAL CIRCULAR OF INFORMATION, detailing the eligible course for PROTECTION of INVENTIONS and DESIGNS, with Reduced Scale of Fees.

Messrs. F. W. Campin and Co. offer their services, and the benefit of many years' experience, in SECURING PATENTS and REGISTRATIONS OF DESIGNS, with due regard to VALIDITY, economy, and dispatch—assisted by scientific men of repute.

Also, in MECHANICAL and ENGINEERING DRAWINGS, whether connected with Patents, Railways, or otherwise, by a staff of first-rate draftsmen.

Application personally, or by letter, to F. W. Campin and Co., No. 210, Strand (corner of Essex-street).

WANTED,—A STEAM-ENGINE, 7, 10, or 12-horse power, to work a crusher and winding-engine; also, TWO CRUSHING-MACHINES, all in good condition.—Application to be made to Mr. E. Williams, mine agent, Oswestry.

FOR SALE (at the works of Sims, Trevena, and Co., Redruth), a NEW 20-horse power ROTATORY STEAM-ENGINE—on Sims's patent combined principle—with or without a boiler. This engine is well adapted for a flour-mill, or for other general manufacturing purposes, and will be sold on very reasonable terms.

TO COPPER COMPANIES, TIN-PLATE MANUFACTURERS, &c.—A GENTLEMAN, possessing a first-rate connection amongst shippers and consumers of the above articles, in one of the largest manufacturing towns in the north of England, is desirous of REPRESENTING a RESPECTABLE HOUSE in the ABOVE TRADES. The most satisfactory references will be given.—Apply by letter to "D. B.," care of the Editor of the *Mining Journal*, 26, Fleet-street, London.

TO MINING CAPITALISTS.—An extensive MINING SETT, situate in the SOUTH of SCOTLAND, TO BE DISPOSED OF, in which a large GOSSAN LODE has just been discovered, strongly mixed with lead near the surface. By an assay, it produces 11 ozs. of silver to the ton of ore; and, in the present state of the lead market, will fetch £10 to £10 10s. per ton. There is a fall of water very near the discovery, which can be made available to work the concern to some extent.

Much of the stuff taken from the lode, a few feet from the surface, would pay for crushing or stamping; but the advertiser not having capital to lay the concern open, erect necessary machinery, &c., which, he conceives, could be done to ensure good returns, at a comparatively small outlay, is anxious to TREAT with any PARTY, on very liberal terms, who may be willing to avail themselves of the undertaking. The sett has been taken for 21 years, at 1-14th dish.

For further particulars, apply to "A. B. C.," care of the Editor of the *Mining Journal*, 26, Fleet-street, London.

TO CAPITALISTS and OTHERS WANTING to INVEST CAPITAL, where a very high per centage can be obtained with a small outlay, in MINERAL SPECULATIONS, of undoubted wealth, without personal risk.

Full particulars and prospectuses may be had on application to George Gandell, Esq., stock and share broker, 1, Royal Exchange-buildings; Mining Offices, 20, Great Marlborough-street, Regent-street, London; Mr. John Downham, stock and share broker, Bury and Manchester; Mr. Joseph Clarke, jun., stock and share broker, Southampton; Messrs. J. D. Redmond and Co., 22, Exchange-street East, Liverpool.

JOHN GATES, Secretary.

TO BE SOLD, OR LET, a valuable COAL MINE, in the township of GREAT HARWOOD, in the county of Lancaster. The mine has been recently proved, and found to be 3 feet 2 inches in thickness, and of excellent quality; it is commonly called, or known, by the name of the UPPER MOUNTAIN MINE, and extends over about 1000 statute acres, which will be divided into suitable lots.

The property is situated between the towns of Blackburn and Clitheroe, and is intersected by a branch of the East Lancashire Railway.

A section of the borings may be seen, by applying to Mr. Boosie, Rufford-hall, Ormskirk; or to Mr. Whittle, coal viewer, Charnock Richard, Chorley—to either of whom proposals may be sent.

MINING OFFICES—Established Five Years.—THOMAS P. THOMAS begs to inform his friends and the public, that he has REMOVED from No. 18, Threadneedle-street, to No. 3, GEORGE-YARD, LOMBARD-STREET, LONDON (late Messrs. Philips and Tiplady's).

N.B.—Dealer in English and Foreign Funds, Mining, Railway, Gas, and other shares.

MR R. TREDINNICK, THREE KING'S COURT, *LOMBARD-STREET, LONDON,*

Continues to DEAL in every description of MINING, RAILWAY, BANKING, INSURANCE, CANAL, and OTHER SHARES.—Statistical information afforded gratuitously upon personal application.—MONEY ADVANCED upon the above securities.

WILLIAM W. TAYLOR & CO., MINERAL SURVEYORS, MINING SHAREBROKERS, &c.,
No. 2, ROYAL EXCHANGE-BUILDINGS, LONDON.

JAMES LANE, MINING SHARE DEALER,
75, OLD BROAD-STREET, LONDON.

WILSON & FRASER, 2, WELLINGTON-BUILDINGS, LIVERPOOL, and 13, EXCHANGE-PLACE, GLASGOW, have always ON SALE PIG-IRON, BAR-IRON, RAILWAY CHAIRS, and RAILWAY BARS.

MONEY.—MESSRS. KILLICK & CO. (late Winstanley, Killick, & Co.), SHAREBROKERS, inform their friends and the public, they make IMMEDIATE ADVANCES, to any amount, on the deposit of English and Foreign Railway Shares, Scrip, and Debentures, upon exceedingly advantageous terms: they also BUY and SELL every description of STOCK and MINING SHARES, at much less commission than usually charged.—6, Bank Chambers, opposite Bank of England.

MEXICAN AND SOUTH AMERICAN COMPANY.—The directors of the Mexican and South American Company hereby give Notice, that, on Wednesday, the 27th inst., at Two o'clock, they will be ready to RECEIVE, at the company's offices, 10, New Broad-street Mews, TENDERS for the under-mentioned SHARES in the said company, the call on which, due the 26th Oct. last, has not been paid:

Certificates of Five Shares each.	*Certificates of Ten Shares.*
Nos. 13 to 16, 471, 489 to 498, 500 to 502, 508, 510, 511, 514, 516 to 528, 530, 532, 539 to 568, 596 to 598, 606 to 608, 610, 615 to 618, 622 to 628, 634 to 638, 644, 645, 647 to 666, 686 to 690, 718 to 730, 904, 918 to 921, 934, 937, 938, 943, 944, 949, 951 to 954, 967, 969, 971, 972, 976 to 979, 983, 984, 988, 989, 996, 997, 1000.	Nos. 1011, 1012, 1018 to 1020, 1027, 1031, 1034, 1035, 1040 to 1045, 1054, 1055, 1060 to 1062.

The form of tender may be had at the company's office.

H. W. SCHNEIDER, Managing Director.

10, New Broad-street Mews, Sept. 4, 1848.

NATIONAL BRAZILIAN MINING ASSOCIATION.—At a Public Meeting of the shareholders of this association, held at the London Tavern, on the 28th of August, 1848,

["Unmarked Shares."]

It was resolved,—That the directors be authorised to receive, at the rate of £4 per share, by instalments of £1, on or before the 15th of September next—£1 on or before the 15th of October next, and the remaining £2 on or before the 31st of December next; and in failure of payment, the shares to be forfeited, as they may be advised; and in the case of such failure, this resolution to be without prejudice to any forfeiture which may have already taken place. THOS. CORNEY, Chairman of the Meeting.

CALL OF 10TH FEBRUARY, 1847.

The directors hereby give Notice, that, in accordance with the decision of the said meeting, the unpaid instalments of the call of £4 per share, made on the 10th February, 1847, will also be received, and that the same must be paid on or before the 30th Sept. next. The instalments and calls above-mentioned are to be paid into the Commercial Bank of London, Lothbury, where receipts will be given for the amount; and on the shares, with the banker's receipts, being left at this office, an acknowledgment will be given for the same. After three clear days the unmarked shares will be returned, with the instalments receipted on them, and for the others new shares will be issued in exchange. By order, JOHN KEMPSTON, Secretary.

26, Throgmorton-street, August 30, 1848.

WHEAL LAWRENCE COPPER AND LEAD MINING COMPANY—BRIDFORD, NEAR EXETER.

This company has been formed by a few private gentlemen, and consists of 1024 shares, upon which a deposit of £3 per share will be required upon the formation of the company.

Application for shares to be made to the secretary, at the office of the company, No. 3, Winchester-buildings, Old Broad-street, London, where a list of the directors, with a prospectus, may be obtained.

CORNWALL NEW MINING COMPANY

Capital £100,000, divided into 20,000 shares, of £5 each.
Deposit, £1 per share.
Three further calls, of 10s. per share, at 6, 12, and 18 months.
Incorporated in pursuance of the Statute 7 and 8 Victoria, cap. 110.
Bankers—London and County Bank, 21, Lombard-street.

The CORNWALL NEW MINING COMPANY is ESTABLISHED TO WORK a series of TIN and COPPER MINES, chiefly in the district of ST. IVES, which has hitherto afforded a larger profit on its return of ore than any other part of the county.

In pursuance of this plan, five have been already selected—*viz.*: Georgia Tin Mines, Trewortha Tin and Copper Mine, Bray Tin and Copper Mine, Treverne Tin and Copper Mine, and Wheal Squire Tin and Copper Mine—with whose owners the directors have succeeded in making such advantageous arrangements, as to enable them to work one or more with even a small portion of the proposed capital.

The directors beg to announce, that they are NOW ALLOTING the SHARES in the above company; and, from the number already disposed of, they request parties desiring to take shares to make early application. Those to whom allotments have been made are requested to pay their deposits into the bankers of the company, as above.

The Deed of Settlement having been executed by the required number of shareholders to incorporate the company, parties who now take shares will not be required to pay up the £5, or enter into any personal liability for calls or otherwise, although reserving their full Rights as Shareholders.

Office, 17, Essex-street, Strand. GEO. LOCKWOOD, Secretary.

A Lucky Emigrant.—About 16 years ago a young man, named J. B. Graham, came down from London to Sheffield, under an engagement as upholsterer to Mr. G. Eadon, carver and gilder, Pargate. He was then about 20 years of age, and made himself so useful as a man of all work, and behaved so well that he soon became a very confidential servant. About 10 years ago Mr. Eadon entertained the idea of emigrating to Australia. He was at considerable pains to procure books, maps, and all available information about the colony; and Graham, who had a hearty sympathy with his employer, was fully informed of the whole affair. Circumstances led Mr. Eadon to abandon the project of emigration, but Graham resolved to go alone. He had saved during the seven years he had been with Mr. Eadon about 40*l.*, which served for an outfit, and Mr. Eadon intrusted him with a consignment of goods to the value of about 250*l.* He also took with him excellent attestations to character. With these credentials Graham sailed for Adelaide in May, 1839. The goods in his care, and his testimonials, soon assisted him to obtain employment. He was engaged to keep a store, with liberty to stow and sell there the goods he had taken out, as well as those of his employer, at 2*l.* a week. He hung up his hammock in the store, and began to do business and save money. After some time he was tempted to relinquish this engagement for another, which offered him peculiar advantages, and ere long he set up as a storekeeper on his own account. About four years ago, a scheme was set on foot for working a rich copper mine that had been discovered 100 miles from Adelaide. Mr. Graham had information on the subject, which gave him confidence enough to embark in it all the money he could raise. He took a considerable number of shares of 8*l.* each, and now owns about one-sixth of the whole concern. This is the Burra Burra Copper Mine, where much of the ore yields from 60 to 70 per cent. of copper. It is already an extensive and most profitable undertaking, and is likely to be, for many years to come, increasingly advantageous. It is worked by several hundred Cornish miners, and preparations are in progress for smelting ore on the spot. This will render available a great quantity of the less productive ore, which would be worth about 10*l.* per ton in England, but on account of the cost of the carriage, is comparatively worthless there. Mr. Graham's shares already produce him 16,000*l.* a year. He is now on a visit to England, and has this week been in Sheffield, where he has received the hearty congratulations of his old friends on the brilliant success which has attended his industry and enterprise at the Antipodes.—*Halifax Guardian.*

An Enormous Blast.—At the quarry belonging to T. Gill, Esq., at Millbay, there have of late been several blasts of large masses of limestone rock, for the works of the Great Western Docks. One of these took place on Saturday, in the presence of a large concourse of spectators. The hole for blasting was bored with a 4-inch bit, the largest ever used in this part of the country, as we are informed, and it occupied the men four days and four nights to make the rock fit to receive the gunpowder. The quantity of powder used was 125 lbs., and the weight of rock separated was about 3000 tons. The largest stone was 14 feet long, 11 feet wide, and 9 thick.—*Plymouth Journal.*

A Bad Leg Cured by Holloway's Ointment and Pills, after Twenty Years' Suffering.—Extract of a letter from Mr. Andrew Brack, blacksmith, Eyemouth, dated Aug. 10, 1848:—To Prof. Holloway. "Sir,—I have the pleasure to inform you, that I have obtained a most extraordinary cure by the use of your celebrated ointment and pills. For upwards of 20 years I suffered with a dreadful bad leg, and during that time I consulted several eminent surgeons, but their efforts failed to do any good. I then had recourse to your ointment and pills, which, with the blessing of Providence, have completely healed my leg, and made it as sound and perfect as ever." Sold by all druggists; and at Professor Holloway's establishment, 244, Strand, London.

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With 40 coloured engravings on steel.
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"Unquestionably this is a most extraordinary and skilful work, and ought to be extensively circulated; for it is quite evident that there are peculiar habits acquired at public schools and private seminaries, which are totally unknown and concealed from the conductors of those establishments, and which cannot be too strongly reprobated and condemned. The engravings that accompany the work are clear and explanatory; and being written by a duly-qualified medical practitioner, will, doubtless, be the means of saving many a youth, as well as those of maturer age, from the various evil consequences resulting from early indiscretions."—*Magnet.*

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Part the First treats of the anatomy and physiology of the reproductive organs, and is illustrated by six coloured engravings.—Part the Second treats of the consequences resulting from excessive indulgence, and their lamentable effects on the system, producing mental and bodily weakness, nervous excitement, and generative incapacity; it is illustrated by three explanatory engravings.—Part the Third treats of the diseases resulting from infection, either in the primary or secondary form, and contains explicit directions for their treatment. The consequences of neglect, and of the abuse, of mercury are also clearly pointed out. This section is illustrated by 17 coloured engravings.—Part the Fourth treats of the prevention of disease by a simple application, by which the danger of infection is obviated. Its action is simple, but sure. It acts with the virus chemically, and destroys its power on the system. This important part of the work should be read by every young man entering into life.—Part the Fifth is devoted to the consideration of marriage and its duties. The causes of unproductive unions are also considered, and the whole subject critically and philosophically inquired into.

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Reviews of the Work.

We feel no hesitation in saying, that there is no member of society by whom the book will not be found useful—whether such person hold the relation of a parent, preceptor, or a clergyman.—*Sun*, Evening Paper.

J. L. Curtis, *On Manhood, and the Causes of its Premature Decline; with Plain Directions for its Perfect Restoration.*—[Strange, Paternoster-row.]—This is a book replete with valuable advice and information. It developes the fearful shoals on which a large proportion of human happiness is wrecked, and furnishes a chart by which they may be avoided and escaped. Fortunate for a country would it be, did its youth put into practice the philanthropic and scientific maxims here laid down. One cause of matrimonial misery might then be banished from our land, and the race of the enervate be succeeded by a renewal of the hardy vigorous spirits of the olden time.—*United Kingdom Magazine.*

Manhood: a medical work.—To the gay and thoughtless we trust this little work will serve as a beacon to warn them of the danger attendant upon the too rash indulgence of their passions—whilst to some it may serve as a monitor in the hour of temptation, and to the afflicted as a sure guide to health.—*Chronicle.*

Manhood: by J. L. Curtis and Co.—Their long experience and reputation in the treatment of these painful diseases is the patient's guarantee, and well deserves for the work its immense circulation.—*Era.*

Published by the authors, and may be had at their residence; sold also by Strange, 21, Paternoster-row, London; Heywood, Oldham-street, Manchester; Philip, South Castle-street, Liverpool; Robinson, 11, Greenside-street, Edinburgh; Berry and Co., Capel-street, Dublin; and, in a sealed envelope, by all booksellers.

ELECTRICITY.

The Accidental Circumstances which caused the Discovery of the two Electric Currents by Dr. Serny, M.D., in the year 1794.

During the experiments in which Dr. Serny was engaged while instructing his pupils in the science of electricity, a rat was brought in, which had been trapped; as the machine was in action, a large jar was charged for its destruction. The rat was placed on an insulated stool, and a chain fastened round its neck, a circuit was completed, by bringing a discharging rod in contact with the tail, which had been previously attached to a chain having a communication with the inside of the jar. The rat, after the shock, was motionless, and apparently killed, indeed, it was supposed to have been quite dead. In about 10 minutes it was proposed to pass the contents of another charged jar through the animal, to make certain of his not returning to life; but, to the astonishment of all present, he was immediately brought to animation again, and got upon his legs; the shock was over and over again repeated, and it only seemed to increased its vigour. It was finally set at liberty.

The jar was again charged, and its contents were made to pass through a pack of cards bound together with string; and, upon examination, the cards were found to be perforated on both sides, leaving from six to eight cards whole in the centre of the pack; the holes were conical, the base being at the outside on each side, and the apex towards the centre. This circumstance at once led Dr. Serny to come to a conclusion that there must be a double current of the electric fluid, for upon what other ground could he suppose the cards to be perforated in opposite directions? The doctor, in furtherance of proof, resorted to the following experiments, which clearly prove there are two currents caused by two different sorts of electricity, for the purpose of neutralising one another, and restoring that equilibrium which Nature so beautifully arranges in all her works. He puts forward this simple experiment, which may be tried by any tyro in the science.

If four electroscopes be excited, first, No. 1 by a piece of sealing wax, rubbed by a piece of silk, the gold leaves of the electroscope will diverge from one another. Let an electroscope, No. 2, be excited in the same manner as the first, and the result will be the same. Let the electroscopes, Nos. 3 and 4, be excited by means of a glass tube rubbed by a piece of silk, the gold leaves will diverge from one another in both of them, as in the other two, there being no apparent difference. Now, by taking a discharging rod, opened so that one end shall touch the first, and the other the second electroscope, the gold leaves of both will remain diverged; and, if the same be done to the third and fourth electroscopes, the result will be the same. But, if the discharging rod be made to touch with one end the first and third, and then the second and fourth, electroscopes, the whole of the gold leaves of the four electroscopes instantaneously collapse, thereby showing that the two electric fluids have neutralised each other, in all the four electroscopes, by their perfect union.

In many of the experiments performed at the Royal Polytechnic Institution, spontaneous discharges take place when charging their powerful battery, and the side of the jars are in a space varying from $\frac{1}{4}$th to $\frac{3}{4}$ of an inch in diameter, in a state nearly pulverised; indeed, in some instances, when the fracture is of the smaller size, where these two currents met, the glass resembles a mere dust. Had the current been in one direction only, this appearance could not take place; the particles would be driven out, or the jar broken into pieces by their meeting exactly with the same force and at the same time; nothing is disturbed from its place; the particles are merely crushed.

THE COST-BOOK SYSTEM.

Vice-Warden's Court—Cardozo *v.* Roskrow.—We only incidentally alluded to this case in last week's *Mining Journal*, being pressed for space; but, as the question raised is of considerable importance, as arising out of the Cost-book System, we proceed to give a more detailed abstract of the case. Action was brought to recover the several sums of 36*l.*, 63*l.*, 300*l.*, and 150*l.*, and the plaintiff and defendant were both inhabitants of Redruth.

It appeared, from the evidence of Mr. Moyle Painter and other witnesses, that in the latter part of 1846, or early in 1847, Mr. Painter was asked by Mr. Cardozo, the plaintiff, to take part in getting up a company in Liverpool to work Wheal Tolgus Mine, which, it appeared, had been worked some years previously under the name of North Wheal Buller, and had been suspended. In consequence of communications between Mr. Cardozo and Mr. Painter, the latter at length went to Liverpool, to endeavour to form a company. He met with persons willing to engage in the scheme. A meeting was held sometime in January, 1847, at Liverpool, when Mr. Taylor, Mr. Tamplin, and Mr. Painter were present, and the three directors of the company were then nominated—namely, Mr. Taylor, Mr. Tamplin, and Mr. Wood. Those parties afterwards acted as directors. The plaintiff, Mr. Cardozo, then went to Liverpool, and it was for travelling and expenses while there, and subsequent expenses (as he alleged on the business of the company), that his first claim was made for 36*l.* The next claim of 63*l.* arose from plaintiff having been appointed purser at 5*l.* 5*s.* a month, but, as stated by him on a yearly engagement, when he was discharged, and Mr. Painter took his place without due notice, he claimed a year's salary. The claim of 300*l.* was on account of the purchase-money of the mine—a part of which only he alleged had been paid to him by the new company; and the last claim was for an alleged lien on the materials. In August, 1847, he relinquished 188 shares, having previously assigned to other parties his 500 shares, and the terms of such relinquishment were, reserving his proportion of the machinery and materials; and until they were sold and his claim satisfied, Mr. Stokes submitted that the plaintiff had a lien on them, in the same manner as a merchant or other mining creditor might have. To show the custom of the county in this matter, he called Mr. F. Daniell, of Camborne, who had been purser of a number of mines.

Mr. Daniell stated, that in cases where mines are continued, and shares are relinquised by entering to that effect in the cost-book, the practice was to value the materials on the mine, and at the expiration of two years the person so relinquishing was entitled to his proportion of the value of the materials, and was paid accordingly, the funds for that purpose being raised, either from the produce of the mine or from calls. In the case of a mine that was discontinued on relinquishments, it was usual to wind up the affairs as soon as possible; the materials were sold by auction, and after payment of the debts of the mine, the residue was divided *pro ratâ* among the shareholders; the party who had relinquished was also entitled to be paid, the valuation in such a case being that which the materials fetched at the sale, so that the relinquishing adventurer was in the same position as the others; the merchant was always paid before the outgoing adventurer. In August, 1847, the materials were valued at 1050*l.*, and it was determined to have a sale.

The petition in the present case, with the seal of the court, was then served on the defendant Roskrow, notice was given to the auctioneer, and the plaintiff forbade the sale, saying he had a claim on the mine, and should look to those who purchased for payment. The sale, however, proceeded, the materials were sold, and the plaintiff now claimed in respect to his share of them, 150*l.*

There was a great deal more evidence *pro* and *con.*, when the case was adjourned to the following Tuesday, to give Mr. Stokes time to search for precedents, on which day he stated, that he had done so, but could only trace one, which had been followed by a decree, Reed *v.* Simmons, in 1804.

The Vice-Warden then delivered judgment in the case. The suit, he said, was against the only person who appeared to be the agent of the shareholders in South Tolgus Mine, and, therefore, the suit was like that of a mining creditor who alleges that he has credited a mine, and has promoted its mining operations; but, in this petition, a very small part of the balance demanded is described as such as a mining creditor sues for when he sues the agent of the adventurers, and yet the prayer of the petition is in the words of a mining creditor suing for the customary remedy. It had been decided in several cases, that the mining creditor, who had rendered supplies to the mine, and promoted its operations, had his remedy against the adventurers and the machinery, and it was sufficient that he should sue some person sufficiently representing the adventurers. In the present case, although the plaintiff had not alleged that his whole claim arose in the way of a mining creditor, he had made the agent, and mere storekeeper, on the mine the defendant. The question, as to whether he was a proper defendant, depended on whether there was a custom by which the plaintiff had a lien that may be enforced against the agent alone; and for this he (the Vice-Warden) held there was want of precedents; he would, therefore, next examine whether any part of plaintiff's claim might be regarded as a mining creditor's debt. The first claim was for his salary as purser; and, as this was for work done in promoting the mine, the purser was a mining creditor, and may sue according to the custom. The claim was for 63*l.*, for a year's salary; but it was clear that the plaintiff was not engaged for a year, and, under the circumstances of the case, he could not decree to him any part of the sum demanded. The plaintiff next claimed 300*l.* for the transfer of the sett; but as this could not be considered as in the nature of a mining creditor's debt, it could not be recovered from the defendant, as agent of the adventurers. The third claim was 36*l.* 7*s.* 6*d.* for expenses alleged to have been incurred by the plaintiff on account of the adventurers in February and March, 1847. But plaintiff's expenses at Liverpool could not be considered as a mining creditor's debt, because that must accrue when an adventure was in operation; and all that was said to have been done by plaintiff subsequently for the company was unproved, so that he could not recover any part of his claim on this account. Then there was plaintiff's claim as a relinquishing shareholder. It was clear to him (the Vice-Warden) that the relinquishing adventurer retains an interest in the materials, not in the shape of joint possession of an undivided portion, but merely as for a debt. On this, plaintiff's advocate argued, that the relinquishing adventurer becomes a mining creditor, and might sue according to the custom of an ordinary creditor. But there was no precedent for this, except what had been mentioned, and without evidence of precedent, the relinguishing adventurer did not appear to fulfil the conditions of a mining creditor—the latter having supplied his goods or labour on the credit of the adventurers and the mine chattels, whilst the former had been a part owner of the chattels himself. The Vice-Warden mentioned one or two other objections to a relinquishing shareholder being regarded as an ordinary mining creditor, and said, the evidence of the custom also appeared to be against that view, for when a sale of the materials took place, the mining creditors were first paid from the proceeds, whereby it seemed that a distinction was made between such mining creditors, and creditors in the situation of the plaintiff as a relinquishing shareholder. The Court, therefore, dismissed the petition as unsubstantiated, the costs to follow the event.

Proceedings of Public Companies.

MEETINGS DURING THE ENSUING WEEK.

Wednesday...Wheal Walter Mining Company—offices, at Twelve.
Thursday....Gonomena Mining Company—Liskeard.
Friday.....Commercial Dock Company—offices, at One.

[*The meetings of Mining Companies are inserted among the Mining Intelligence.*]

CALEDONIAN RAILWAY COMPANY.

The half-yearly meeting of shareholders was held in Edinburgh, on Thursday, the 31st August (briefly alluded to in our last Journal, in which the resolutions were published)—J. J. H. Johnstone, Esq., in the chair.—The meeting was fully attended; and, in the absence of Capt. Coddington, the secretary, Mr. Gibson read the directors' report. It stated, that the opening of the Castlecary branch on the 7th ult. had established a communication by the Caledonian Railway, and the lines in alliance with it, from London to Perth, Stirling, Dundee, Arbroath, Forfar, and Montrose; but the value of this extension could not be fully established until the connection, *viâ* Perth, was formed with the Dundee line, and until the trunk line was completed to Aberdeen, both which objects would be effected before the expiration of six months. By this time they also anticipated the extension of the Garnkirk line into Glasgow, the completion of the Clydesdale Junction, and its connection with the Greenock, Barrhead, and Ayrshire lines, and through the general terminus railway with Glasgow Harbour, all of which would essentially contribute to the development of the traffic. When they were in operation, there could be no reason to doubt that the shareholders would receive an ample return for the money they had invested. Henceforth the shareholders in the Clydesdale Junction would be entitled to a preferential dividend of 27,000*l.* a year, being 6 per cent. on their capital of 450,000*l.*, and its prospects held out a considerable surplus beyond the amount of guarantee. The Glasgow and Greenock line would be shortly amalgamated with the Caledonian, and it already realised 4 per cent., the amount of the guarantee. The local traffic of these districts held out every prospect that the company would be relieved from any loss on account of the arrangements which had been entered into with these companies, whilst a great additional amount of traffic along the main line could not fail to be secured by the uninterrupted communication with Ayr and Renfrew, and access to the Western Highlands. It is with much satisfaction, the directors intimated, that they had at last succeeded in effecting an arrangement of differences with the Edinburgh and Glasgow, upon terms which they considered equitable; but as there were matters of detail that required the sanction of southern companies, the details of it could not be announced. The arrears on the several classes of shares at the present time were as follow:—On the 50*l.* shares, 31,110*l.*; on the Clydesdale Junction, 4825*l.*; on half shares, 193,648*l.*; and, in the present depressed condition of monetary affairs, the directors had not been able to enforce further payments, and they believed there was no other course by which the arrears on these shares could be realised, than by the adoption of a proposal made by many of the shareholders, for a restriction of the half to quarter shares. The revenue account, after making provision for the dividend on the Garnkirk and Wishaw works, exhibited a balance of 21,408*l.*, which showed a return of 2½ per cent. per annum; but the directors were of opinion that it would not be prudent to make a dividend for this broken period, but that it remain at credit for revenue account. They considered the result was, nevertheless, encouraging, seeing that the traffic of their line was as yet but imperfectly developed, and the receipts had gradually increased, and showed an advance of 30 per cent. since the 30th of June last. The directors recommend the conversion into stock of all shares paid in full.

The report of Messrs. Locke and Errington, the engineers, stated, that the opening of the Castlecary extension gave 141 miles of the Caledonian Railway now in operation, and completed a system of railway from London to Montrose of 500 continuous miles. All the works were in good order, and a large labour force had, in addition to that previously employed, been placed on those in progress—the Clydesdale Junction, Motherwell, and Hamilton branches. The statement of the capital account showed receipts—Original capital, 50*l.* a share, called up 2,100,000*l.*; amount in arrear, 68,230*l.*; amount paid, 2,031,770*l.*; new capital, 6*l.* 5*s.* per share—amount called up 293,975*l.*; amount of arrears, 101,811*l.*; amount paid, 192,163*l.* In anticipation of calls on new shares, 41,854*l.*; Clydesdale Junction, 180,066*l.*; total, 3,645,975*l.*; balance, 337,898*l.*; total expenditure, 3,998,731*l.* The revenue account for the past half-year showed a receipt of 93,857*l.*, and a balance in hand of 21,408*l.*

The Chairman addressed the proprietors in a speech which was principally confirmatory of the report. The liabilities that had been incurred, and the works that otherwise would have been stopped, rendered it impracticable to postpone the preference share arrangement. As regarded the guarantees, they would call a special meeting to consider them, and the directors were of opinion that it would be advisable to hold some of the meetings in London. When the mercantile community was again in activity, they would receive an ample return for their money. The capital of 5,000,000*l.* which they were authorised to raise, would be sufficient to complete all the works.

A long discussion ensued, relative to anonymous letters that have appeared, and on the topics contained in the report, in which Messrs. Blackadder, Kynaston, Tite, Col. Graham, Sir W. Jardine, Hon. B. Johnstone, and others, took part; after which resolutions, confirming the recommendations contained in the report, were carried, and the directors, after a counter proposition, were re-elected.—Sir A. Agnew, in a lengthened speech, proposed the suppression of all systematic and premeditated work upon the Sabbath; to which

Mr. Campbell moved, as an amendment, that "the resolution adopted by a former meeting be agreed to."

After a long discussion, the question was put to the vote, when there appeared against the motion 27, and 24 in its favour, the proxies being for Sir A. Agnew's motion, 3654, and against it, 22,013.

Railway Department.—A return was issued, on Thursday, printed by order of the House of Commons, on the application of Mr. Bankes, "of the powers and duties incident to the railway department, as at present exercised." Under general Acts, the commissioners have duties and powers respecting the opening of railways, the inspection of railways, the construction of roads and bridges, powers as to deviations from gradients, curves, &c., junction of branch railways, authorising companies to enter adjoining lands, as to level crossings, as to cheap trains, mail trains, as to disputes between connecting railways, appointment of umpires, by-laws, enforcing provision of railway Acts, as to returns, reports to Parliament, and proceedings under the Extension of Time Act. Besides the general duties under a number of Acts of Parliament, the commissioners have provisions in Acts of railway companies referred to them. About 185 Acts of the last session (1847), contained provisions, and they have to investigate charges against railway companies of non-compliance with the provisions of their Acts generally. The commissioners have to inquire into the circumstances and causes of railway accidents; they have to examine all railway bills, and also Acts passed by the Legislatures of the colonies relative to railways.

Royal Assent to Railway Bills.—Eighty-three railway bills received the Royal Assent during the late session. The amount of capital authorised to be raised by these bills is 10,794,660*l.*; and the sum to be borrowed, 4,137,610*l.*, when half the capital is paid up, making together 14,887,270*l.* This money is required to complete certain railways in course of construction, to establish steam-boats in connection therewith, and to construct 413 miles of new railway, consisting principally of branches.

South Devon Railway.—The working of this line by the atmospheric system was brought to a conclusion on Wednesday last, when the whole length of the line was worked for the first time by locomotive power. The atmospheric system is, in the language of the directors, suspended; but it is very doubtful whether it will be resumed again on this line. On Monday last the contractors began to lay the rails for the permanent line from Laira towards Plymouth, and the works in that part are being carried on with great industry.

Lilliputian Engines.—Among the plans which these pinching times of poverty have suggested for the economy of working expenses, one of the most curious and important seems to be the Lilliputian system of Mr. Samuels and Mr. Adams, now about to be fairly tried in working the branch traffic on part of the Eastern Counties and of the Bristol and Exeter. To diminish the unprofitable weight of a train to the utmost, and to increase the tractive power of that weight, are the objects of this invention. They propose to form a single large carriage, like those at present made by Mr. Adams, for the North Woolwich branch of the Eastern Counties, capable of carrying 60 passengers, and to carry on the front of it a small locomotive engine. The tender will form part of the carriage. Of course the weight of the whole is to be placed extremely low. There will also be a small additional carriage, so as to take on the whole 100 or 120 passengers, with engine and tender. The weight of engine and carriage will not exceed some 12 to 15 tons, and, with passengers, will weigh perhaps 20 tons. We have seen one of these Lilliputian trains in process of construction at the works of the Eastern Counties Railway, and in the workshops of Messrs. Adams and Co. The wheels are so placed as to throw a great part of the weight of passengers on the driving-wheels. By this means they will receive additional adhesion, with additional load. The design seems ingenious, and the workmanship good. The experiment on the whole is promising, and highly interesting. The advantage of working small or branch traffic in this way will be its economy. The light weight of engine and train will diminish wear and tear, as well as coke and other working expenses. At present these are so high, as to render branches in many cases unprofitable. It is proposed also to run light expresses in this manner.—*Railway Chronicle.*

STATE OF THE COAL AND IRON MINING DISTRICTS.

In our last Number, we briefly noticed that Mr. Seymour Tremenheere, the commissioner appointed to inquire into the operations of the Act of 5th and 6th Vic., cap. 99, had made his annual report, comprising the Forest of Dean, Shropshire, Lanarkshire, and Ayrshire. From this report, we learn that the attention of the commissioner having been, on former occasions, directed to the large masses of the mining population in the principal northern coal-fields of the kingdom, he had been unable, until recently, to ascertain whether the provisions of the Act were observed in the less thickly populated districts. His inquiries have produced very satisfactory information. It appears that, even previous to the passing of the Act, females were never employed in the Forest of Dean Collieries; and many of the proprietors refrained from employing boys under 10 years of age—convinced of the benefit the colliers themselves would derive from keeping their children at school until 10 years of age. Some few proprietors admitted the employment, on some occasions, of boys under the legal age; but promised, now their attention had been called to the subject, to exclude them for the future. A great increase has taken place in the number of schools in the Forest; and a great number of parents avail themselves of the advantage, and consult the interests of their children, in keeping them a sufficient time at school. A considerable number of children are, however, growing up, who are only sent to the Sunday-schools—the excuse of the parents being, "they cannot afford to pay for a day-school." Notwithstanding, in this, like every other mining district, fluctuations in the demand for labour will take place, the general condition of the colliers and miners, with very few exceptions, is such as ought to enable them to give their children a useful education at the day-schools; and where this is neglected, it generally arises from extravagant habits in the parents, or drunkenness. The latter has unquestionably much diminished in the district; but there is still sufficient to interfere too often with the duties of the men towards their children, and often with the means of sustaining their own bodily strength by wholesome food; and it is unfortunately encouraged by the systematic payment of wages of the men in public houses, very general in the Forest, and against which it is highly desirable that the clause in the Act, rendering it punishable, be put in force. This system is attributable to the practice of the proprietors not employing the men direct themselves, but letting the work to contractors in small portions, each employing a few men. It is a common rule for each man to contribute 6d. from his wages which is spent in drink, whether he is present or not. A few of the proprietors set their faces against this mode of payment; and they state that they find their advantage in it—obtaining better and steadier workmen. The truck system is practised in some of the smaller collieries, and great dissatisfaction is expressed at it by the men; but the wives of those who are inclined to squander their earnings in drink, prefer their working where the truck system exists, as it secures to them food and clothing for the family. There is, however, no compulsion to take "notes" in any of the collieries; and the steady workman need seldom be under the necessity of forestalling his wages by taking them. The Forest of Dean comprises an extent of 22,000 acres—the whole belonging to the Crown. Its population in 1841 was about 10,000, chiefly situated around its outskirts. The coal and iron of the basin crop out on the line of its circumference, and were the means of attracting the population to the spots they occupy. The free miners, who alone, by the custom of the Forest, were entitled to work the mines, amounted at the time of the commission of 1845, to 1080; and the encroachments, which they had from time to time made upon the Crown property, exceeded 2100 acres, exclusive of boundaries, roads, &c. By the Act of Parliament (July, 1838), the encroachments, made previously to 1787, amounting to 1510 acres, were confirmed and converted into freehold; 573 acres were granted for lives at a moderate rate; and 24 acres for terms of years, at a low rent; their old privileges as miners were partially confirmed, and considerable rights of common preserved to them. These alterations facilitated the employment of larger capital in the mines, the deeper seams not being able to be worked without considerable outlay. New collieries, ironstone mines, furnaces, and tin-works, with numerous other establishments, have sprung up, giving additional employment and good wages to a large proportion of the Forest population, estimated now at about 14,000, of which 2200 men and boys were, in March last, employed in the coal and iron mines of the district. The appearance of the miners' cottages is one of much comfort; the land around is well cultivated, and the gardens neatly kept. The strict attention to cleanliness in the cottages, and the habits of the colliers themselves, place them in strong contrast with the other coal districts of the kingdom. In the most prosperous times, the earnings of the colliers were from 20s. to 25s. per week; but taking the bad times with the good, they average about 16s. the year round. In addition to this, many of them have their houses and no inconsiderable portion of land rent free, with the rights of common in the Forest. Religious and moral improvement have made rapid strides among the population in the present generation.

With respect to the important subject of keeping plans of the workings, and furnishing copies to the inspecting engineer of the district, it appears there are, in the Dean Forest district, about 12 collieries, and some ironstone mines—the deepest being Bilson Colliery, 160 yards; Parkend, 180 yards; Crump Meadow, 240 yards. The four principal companies raised, in 1847, 213,916 tons of coal, and the total production of the Forest, for that year, was 250,000 tons. These are all subject to the inspection of the mining engineer appointed by the Crown, called the Deputy Gaveler, who states that, 10 years ago, the plans were regularly kept at one colliery only; but care is now taken, that they are accurately kept at all. It only takes one person a fortnight to measure the work of a year and-a-half in the whole district, and another week to lay it down on the plan. Numerous statements have been received of the danger of omitting this, from often breaking into old wastes, full of accumulated water, and drowning out the mine, and the necessity of keeping extra pumping power, to be prepared against such accidents.

SHROPSHIRE.—The coal and iron district of this county comprises a space seven miles long by two miles wide, from Colebrook Dale to Donnington. There are 32 iron furnaces, employing about 7000 colliers, miners, furnacemen, &c. Instead of being crowded in a small space, precluding all attempts at cleanliness, or comfort, as the population are in some mining districts, here the cottages are scattered in groups of two or four, and the population, on no particular spot, considerable. They are substantially built, with an upper story, outbuildings, and gardens of ample size, well kept in order. The payment of wages in public-houses is strictly forbidden; the coal contractors are not allowed, on pain of dismissal, to sell beer. Change is amply provided, and the men are paid at the pit cabin, or in other buildings expressly provided. The price of the day's work is made to vary with the price of iron, being raised or reduced 3d. per day, as iron rises or falls 10s. per ton. At the largest works (the "Donnington") no boy was permitted to work underground, if there was any doubt as to health, age, or strength, when he must bring a surgeon's certificate; and a good feeling between the masters and men appears to be universal. The whole district is worked by seven companies, the two principal being Donnington Wood and Colebrook Dale. The works of the former are on the properties of the Duke of Sutherland and Lord Shrewsbury, and the company consists of Lord Granville, Lord Stafford, Hon. F. L. Gower, Mr. Blount, M.P., and others. They employ from 3500 to 4000 men; there are 1200 cottages, with gardens from 8 to 10 roods of land to each; a bakehouse and brewhouse to every four houses; the rent is 1s. per week per cottage, but, if three rooms, 1s. 3d., coal free. The colliers and miners were earning, all last year, 24s. to 25s. per week; since the depression in the price of iron, 16s. 6d., on the average; they live and dress well, and bring up their children creditably and respectably. The Colebrook Dale Company employ about 3000 people, and the above observations apply, in every detail, to these works also.

LANARKSHIRE.—Here, the commissioner states, he found no disposition to disregard the provisions of the Act, but that where 75,000 people are congregated within an area of a few miles round the iron-works, it is desirable to make frequent inspections and reports. An efficient body of rural police has been formed at the expense of the mining interest of the county, and being distributed through the different mining villages, have contributed greatly to the cause of good. A sheriff substitute and procurator fiscal have been appointed, and the administration of justice brought home to the inhabitants. A water company has procured an Act of Parliament, and is about to supply a want which has been greatly felt; many schools have been established, and great attention is paid by the proprietors to decency and cleanliness in the rows of cottages belonging to them; at all the works one or two men are employed, whose sole duty is to keep the roads and spaces around the cottages clean, and report cases of wilful neglect; incorrigible dirty families are dismissed; the greatest comforts are, however, everywhere visible. In this county the misguided men cannot be made aware of the follies and miseries attending a strike; notwithstanding the complete failure, as usual, of the one in the autumn of 1847, threats have been since held out of another; 20,000 to 30,000 join in them, and do an immense deal of injury, not only to themselves, but to the capital of their employers, and numerous industrious classes of the community, and without the least chance of redressing, what they term, their own grievances. The most serious result of these strikes is the introduction of large numbers of Irish, who are induced to come into the vacant employ; of the miners, it is said, upwards of two-thirds are Irish, and of the colliers one-fourth, while every successive strike adds to their number; a better feeling is, however, becoming perceptible; some of the better class of workmen have detached themselves from the union, and sought work where their skill and industry could obtain their proper reward—steady and hard-working men earn generally from 1s. to 1s. 6d. per day more than those who belong to the union.

AYRSHIRE.—This county is now growing into an important mining district, and there appears to be a strong desire to prevent such a state of society arising as was exhibited a few years ago around Airdrie and Coalbridge, in Lanarkshire. At the most important works (the Portland Malleable Iron-Works) every precaution is being taken to secure health, cleanliness, and comfort; the cottages are detached, with upper story, back kitchen, front and back garden, and a very moderate rent charged. A miners' library of 260 volumes has been established, the charge being 1s. entrance, and 6d. per quarter; several daily papers and periodicals are taken in, and the reading-room is much frequented by colliers and miners. From 2000 to 3000 men will be employed when the works are completed. To the Glengarnock Iron-Works (Messrs. Merry and Cuningham's), employing 2000 people, the same remarks will apply. As a whole, the report, which is dated Aug., 1848, is highly satisfactory, and evidences that a very improved condition in the habits, manners, and morals, of the colliery population is rapidly advancing.

MINING INSPECTION IN FRANCE AND BELGIUM.

Mr. Seymour Tremenheere, the commissioner appointed to report, from time to time, on the state of the population of the coal districts of the United Kingdom, was instructed, in 1847, to proceed to France and Belgium, and to avail himself of such facilities as might be accorded him in those countries for procuring information as to the steps taken by the French and Belgian Governments, with a view to diminish, as far as possible, the frequency of explosions, and other accidents, in collieries, and to promote the general welfare of their mining population. He was, immediately on his arrival in each capital, placed in direct communication with the Ministers of Public Works, who kindly furnished him with all the means he could desire for attaining the objects of his mission, and themselves added much valuable information regarding the principles and the working of the laws and regulations relating to mining inspection. Mr. Tremenheere visited the four large centres of mining population nearest to England—the districts of Liege, Charleroi, Mons, and Valenciennes, and received from the proprietors and officers of the mines he visited the most frank and ample information of the manner in which the system of inspection acted upon their proceedings in the management of mines; and as the coal district of Valenciennes is the second in importance in France, yielding nearly one-fourth of the whole production of the country, and as the laws relating to mining are nearly identical in France and Belgium, the four districts visited were sufficient to exemplify the principles and practice of mining inspection in the two countries. The laws of France and Belgium are totally different from those in operation in this country; previous to 1791, mines were at the disposal of the nation, and were subject to its inspection, and, after seven or eight fluctuations in the framing of mining laws, the *Code Napoleon*, in 1810, established the present systems in both countries, which transfers to the Government the absolute right of determining to what parties permission to work the mines shall be granted, whether proprietors of the surface or not, only reserving to such proprietors a certain amount of dues, and indemnity for damage done to the surface.

The law relative to the inspection of mines, provides that, where the safety of the works, or men, are endangered, the proprietors are to apprise the local authorities; and the Engineer of Mines, as soon as he shall have informed himself of the subject, make his report to the Préfet, proposing the measures he shall think best to remove the causes of danger. The Préfet, having duly summoned and heard the proprietor, shall prescribe the steps to be taken in a written statement, which shall be sent to the Director-General of Mines, or the Minister of Public Works, if need be. When an engineer, on visiting a mine, shall discover an imminent cause of danger, he shall, on his own responsibility, call upon the local authorities to cause such precautions to be taken, as he shall judge expedient. By the above law of 1810, the country was divided into eight mining departments, to each of which is attached an inspector-general, who resides in Paris—the eight forming, collectively, the Council of Mines, attached as advisers to the Minister of Public Works. Under the inspector-general of each department is an engineer-in-chief, and one or more ordinary engineers, according to the importance of the district. To these are also attached one or more of a lower grade, called "Gardes-Mines." The engineer-in-chief resides in the central tower of the district—the others in the localities where their presence, as inspectors of mines, is most required. In carrying out this operation of mining inspection, it is done with the utmost forbearance, and as friendly advisers—the law having, very wisely, most carefully abstained from investing them with the smallest direct authority. In fact, the inspectors are the intermediate officers, by whose means the lights of experience will be transmitted to the managers of mines; and the plan recommended for the safety of the collieries, has made great progress in the district of Mons, by persuasive means alone.

From statistical accounts, it appears that in the Belgian mines, where the Government requires ladders to be placed in every mine, at an angle of 75°, the result is very satisfactory; while from the use of ladders between the years 1821 and 1840 the persons killed and wounded were, in Hainault, 6·8 per cent.; Namur, 3·3 per cent.; and Liege, 1·4 per cent.; while, from the use of chains and buckets they were, Hainault, 10·2 per cent.; Namur, 15·2 per cent.; and Liege, 13·9 per cent. When the authorities have ordered a mine to be suspended, until rendered safe, the proprietors are liable to a fine, and the manager, or director, to imprisonment, in case of an explosion, attended with loss of life, or serious injury occurring before the interdiction has been removed, and the tribunals invariably inflict a severe sentence in every case of the kind, and often, also, when the evidence simply shows that the mine was in a dangerous state, though the authorities might not have caused it to be suspended. The business of inspection is much facilitated by the accurate plans required to be kept at each mine; each proprietor is bound to send to the préfet in the month of January in every year, plans and sections of the works executed within the year, all drawn on the same scale, and verified by the inspecting engineer. The corps of engineers, both in France and Belgium, is composed of gentlemen of the highest attainments that the best scientific education in the respective countries can produce, and being in habit of constant intercourse with the proprietors and managers of mines, accessible, at all times, to the workpeople, fully conversant with all that passes in the district, affecting the interests of both, and bound by their duties to have an especial regard to everything that concerns not only the safety and healthy condition of the mines, but the general interests of humanity in respect to the miners and their families, their influence cannot be otherwise than beneficial; they are often consulted in disputes between masters and men, and are conducive to the interests of both. The following statistics of mining in Belgium will be found interesting:—

	AVERAGE NUMBER OF PERSONS EMPLOYED.		
PROVINCES.	1821 to 1830.	1831 to 1840.	1840 to 1844.
Hainault	16,000	20,500	27,512
Namur and Luxemburg	1,880	2,680	2,450
Leige	8,100	8,320	10,932
Total for the kingdom	25,980	31,500	40,894

In 1000 *persons killed or wounded, there have been*—

NATURE OF ACCIDENTS.	1821 to 1830.	1830–39.	1840–44.
By explosions of gas	377	378	268
Falling in of roof	173	193	259
Causes not specified	67	80	152
Divers accidents in pits	110	105	122
Descending or ascending by cords or chains	120	122	87
Ditto ditto by ladders	40	37	45
Blasting	42	38	35
Inundations	71	47	32
Totals	1000	1000	1000

We conclude with the following interesting extract from the report, entire:

"Although I have observed nowhere on the continent, communities of the families of colliers and miners living in such a state of comfort as the best specimen in this country; such as many of the mining villages on the estates of large proprietors in England and Scotland, or of large companies in both those countries, and also in Wales, in all which cases much care has been taken, and much expense incurred by the proprietors, to provide their workpeople with excellent and well arranged houses and gardens, good schools, libraries, and all the requisite means of moral and religious instruction, and where the earnings are also large, and the employment regular; yet, on the other hand, there are no instances on the continent of mining populations in such a state of neglect, and of moral and intellectual disorder, as a very large proportion of the vast masses congregated in the mining districts of Monmouthshire and Lanarkshire, and many smaller communities of colliers in Staffordshire, Lancashire, Yorkshire, and in other localities in the kingdom. It is commonly said, in excuse for such a state of things in this country, that the populations have been suddenly collected, and that the rapidly increasing demands for the products of mining labour do not allow time for moral considerations in regard to the population. But on the continent, mining populations have, of late years, been as suddenly congregated on remote spots as in our own country, without the same demoralising results. The spirit of order communicated by the Governments of those countries to the people, the higher notions of moral responsibility towards the working population apparently actuating the employers of labour, the greater power of those Governments to enforce salutary regulations for moral objects, and the greater average degree of humane culture diffused among the people themselves, have made such states of society as exist in Monmouthshire and Lanarkshire, impossible in France and Belgium. At several of the largest establishments which I visited in both countries, I saw nothing but a regard to decency, comfort, and convenience in all the arrangements for the workpeople. Their houses are clean; I was informed that the colliers paid particular attention to personal cleanliness; their manners are civil and obliging, and their conduct towards each other partakes of the politeness so general among the continental nations; the vice of drunkenness is uncommon among them; they are careful in bringing up their children, and will make sacrifices for their welfare; they were described as attentive to their priests and to the duties of religion prescribed by them, and in general accessible to reason on any differences between themselves and their employers.

"The large iron and coal-works at Denain, near Valenciennes, have increased rapidly within the last few years, and now employ nearly 4000 workpeople. A very large population has, therefore, been collected, and has flowed thither from various parts of the country. The great and influential company of Anzin have taken care, at this and their various other extensive works, that in bringing these masses of people together for their own profit, they should not place them in circumstances less favourable to the habits and virtues of civilised life than they were in before. Indeed, had the company been disposed to overlook that moral obligation, the Government, as the virtual proprietor of the mining property, and as the guardian of the public interest, would have interposed through its agents to prevent it. Accordingly at Denain, and not more at Denain than at other places similarly circumstanced, the company have, in all their arrangements for themselves and their workpeople, caused the simultaneous growth of a well-ordered society to be as conspicuous as the increase of their furnaces and rolling-mills, and the other external evidences of a rapidly developed and successful industry. Several short detached rows of houses have been built, about 50 paces behind each other, the interval being occupied with gardens; a paved road runs in the front of each, with a paved gutter running into an underground drain. A bake-house, ash-pits, and all requisite conveniences are properly arranged between the rows. It is the duty of the constables to see that everything is kept perfectly clean. Three times a week, at eight o'clock in the morning, a man goes round with a bell, and as soon as he appears, there is a woman out at every door, sweeping and washing before it; the drains are swept and all refuse carried away. Every fortnight a guard visits the houses, to see that all is clean within, and free from everything injurious to health. Schools are provided for the children, and there are means of intellectual improvement for the adult population. The priests enforce attention to public worship. Good order, and a good understanding among all, were said to prevail among the whole community. The temperate habits of the French people prevent the occurrence of any such scenes of disorder and drunkenness as are so frequently exhibited in mining villages in this country, where 30 or 40 public-houses have often been allowed to spring up within a few hundred yards of each other, offering their temptations to a people disposed to that vice, and to whom high wages afford the means of indulging in it.

"The following is the statement respecting this community of the Denian Coal and Iron-Works, made to me by a very respectable Englishman settled among them, Mr. S. Jones:—'I have been here about a year and three-quarters. I came to take charge of the iron-stone pits. I worked as a collier and miner in Shropshire and Staffordshire for 35 years. I was director of Mr. Williamson's pits, near Bilston, for 10 years, and at the same time I worked some pits under Mr. Philip Williams, of Wednesbury Oak, for about 12 years. I find the French workmen very attentive; they follow the work they are put to very steadily and faithfully; they are very civil and very respectful to their superiors; they are much before us for their manners, they never pass each other that they have not a civil or kind word to say to each other, and there is never any quarrelling or fighting among them. They are a contented good-humoured people. The diet of a French collier is very poor compared with an English collier; soup, and bread with a very little butter, and white very poor cheese, vegetables, and a little fruit, very seldom any meat. They cannot do so much work as an English collier, but they are more contented with a piece of bread and an apple than an English collier with his beef-steak. They are very clean, both in their persons and their houses. I have been all over this mining district, and I never saw a cleaner and more decent set of people in my life. They would make most of our English colliers and miners ashamed. They never omit to wash their whole bodies on coming up from the pits, and they put on clean pit dresses never less than twice a week—some of them every day. A man when he is coming dirty from the pit will not stop till he has thoroughly cleaned himself. Sometime I have offered a pint of beer to men after their work, when their hands are dirty, but they have said they would go home first, and when they were clean they would come back and take the beer. They are very careful and industrious with their gardens, which they take great pleasure in, and they store up vegetables for winter use, preserving some of them in lard. The diet is suitable to their work; that is, as they live low the quantity of work they do is in proportion. The work is exactly like Staffordshire long-wall work. Nothing can be safer or more agreeable to work in than the pits in this country. They go to much expense about it, but on the whole, considering the economy of time and labour it produces, I don't think it adds 6d. a ton to the selling price of the coal. Their priests have much influence over them, and they attend mass, most of them, regularly. Each man is obliged to have a book,* in which the date of coming to work at a place or leaving it is entered, and if his former master, on being applied to, gives him a bad character, he need not go and seek work elsewhere. There are about 30 Englishmen working here; I cannot say much in favour of their general conduct as compared with the French. If any 30 of the Frenchmen here were to be transferred to some parts of Staffordshire, they would be so disgusted that they would not stay. They would think they had got among a savage race.'

"May the calm statements of this unexceptionable witness be not without their effect in localities in this country, where due reflection on the real and relative state of things might probably lead to some improvement."

MINERAL WEALTH OF CALIFORNIA.

In the *Mining Journal*, of the 26th August, we gave a brief account of the discovery of valuable minerals in California. The subjoined particulars confirm the statement then given, and add some interesting additional facts:—

Monterey, California, April 30, 1848.—Having heard a few days ago of the excitement existing in the town of San Jose de Guadaloupe, situated in one of the northern districts of Upper California, about the discovery of many different classes of minerals, I made it my business to pay a visit to that place, for the purpose of searching into the truth or falsity of the many reports in circulation, concerning these mines. On my arrival there I was very greatly surprised to find that nothing had been exaggerated with respect to the richness of the quality of the many species of rich metallic ore, reported to have been found in the neighbourhood. Almost every man I saw there, native or emigrant, had in his possession one or more specimens. Silver, quicksilver, and zinc, appear to be the most abundant. I visited several of the places from whence these specimens, as I had been informed, had been taken, and gathered several pieces of minerals, some of which I tested myself, whilst others were tested in my presence by persons more intelligent in the business; and I can with all safety affirm that there is scarcely a hill or a low mountain with which the valley of the town of San Jose de Guadaloupe is bounded on its eastern and western sides, that is not capable of producing immense quantities of rich minerals. As to gold, it is said that several mines containing this precious metal exist in those places, but I am not able to authenticate the report.

Another account, in speaking of the silver mine discovered in the valley of San Jose, by Mr. I. F. Reed, before referred to, describes the vein as being 3½ feet broad, having an uninterrupted run east for three miles, the depth unknown. With a few hours' labour several tons of ore were uncovered. It was fine ore, and required but little expense in smelting. Immense beds of copper ore, and caves of sulphur and saltpetre, had also been found in the vicinity of Clear Lake, north of the Bay of San Francisco.

The following is from a correspondent of the *New York Herald*:—According to indications which have recently come to light, there is every prospect that in the accession of California, the United States have made a very valuable acquisition. We have, on a former occasion, dwelt upon the commercial and agricultural resources of that country; but, great as they are, they sink nearly into insignificance when compared with the immense mineral wealth of that region. By accounts recently received from there, mines of quicksilver of extraordinary wealth have been discovered, the richness of which is almost incredible. In one mine, owned by an English house in Mexico, named Barron, Forbes, and Co., a few workmen, with the rudest description of mining implements, and at an expense very trifling indeed, have been for some time past procuring quicksilver to the value of $300 per day. When proper implements and machinery, which have been contracted for in England, shall have arrived, this company expect to produce immense quantities of this valuable metal. As it is at present, they cannot work to advantage. A few pickaxes, crowbars, and a small lot of common pots, constitute all the implements at work. Yet, with these rude and imperfect means, they produce wealth to the amount of $300 per day. Now that this valuable territory has been annexed to the United States, we may look for an early development of these great mineral resources of California. American skill and ingenuity will soon manifest their presence there, and when directed to these immense mines will, no doubt, reap their due reward. As it is, the ice has already been broken; for we perceive that an association of enterprising Americans, known as the Santa Clara Mining Company, have purchased a mine of great richness, which they propose to work as soon as they can have their machinery completed and transported thither. An accredited agent of the company is now in New York, making the necessary preparations for commencing the enterprise. This mine, we understand, is extremely prolific, and is most admirably located. It is within 13 miles of the bay of San Francisco, and six of the village of Puebla Jose de Guadalupe, with abundance of fuel in the immediate neighbourhood, and a straight and perfectly level road runs from the mine to the main avenue that connects Monterey with San Francisco. The ore has been tested on the spot, in an exceedingly primitive manner—viz.: by placing it in a musket barrel, and applying fire to it; but even with this imperfect test, it yields 30 per cent. of its weight in pure metal. This is the first blow that American enterprise has made at the mineral wealth of California; but it, no doubt, will be followed up, until the resources of that part of our territory shall have been fully developed, and quicksilver as regularly exported from there as breadstuffs and cotton are sent from the Atlantic cities. Indeed, judging from the accounts that we have received of the mineral wealth of California, quicksilver is as easily mined there, and is as abundant in the mine of this American company, and in that of the English company, as coal is in Pennsylvania. Mexico, we suppose, will be the best market for the products. The gold and silver mines of that country will hereafter, no doubt, be more extensively worked than ever; and as quicksilver is an indispensable agent in the business, there will be a constant and steady demand for it. This American mine is so rich, we are informed, that the gentleman who surveyed it, under the directions of the Government, was so much affected by salivation, that his mouth was sore for a period of 10 days after he had concluded the survey. We believe that Mr. Thomas O. Larkin, the United States Consul at San Francisco, was the first American who appreciated the value of the mineral resources of California, and he is the secretary of this new Santa Clara Mining Company. We further learn, that specimens of the ore from this mine are in the hands of a scientific chemist of this city for analyzation. It, therefore, appears, that in acquiring California, the United States have become possessed of an extremely valuable acquisition. What with the splendid harbour of San Francisco, and the agricultural and mineral resources of that country, California promises to be the most valuable portion of our territory.

* "Livre des Ouvriers." Decree of 1813, s. 25.

[ADVERTISEMENT.]

DEAN FORREST.

Sir,—I have read in your last week's Number a libellous attack upon my character, contained in a letter, signed "Geo. Roberts," wherein I am taxed with falsehood and perversion of facts. I am disposed to make great allowances, in consideration of the personal animosity entertained against me by the writer; but I must, in justice to myself, notice, *seriatim*, the seven heads into which Mr. Roberts has divided his subject; and when I have done this, I trust that that individual will admit he has overshot his mark, and that he will regret having thus attacked my reputation.

1. I appeal to my father's books, now in the possession of Mr. Roberts, in confirmation of the fact, that my father's net income actually was about 3000*l.* a-year from his property; and I challenge Mr. Roberts to deny this fact—recorded in my father's writing. I will not quibble about *joint-management, strictly speaking*—but I merely observe, that, for many years, I received a salary from my father as his assistant manager; and that, for months before his death, I was the *sole manager* of his property. I challenge Mr. Roberts to deny this fact.

2. I was not left *by my father's will* sole manager—that would have been unnecessary, for I was already sole manager; and Mr. Roberts was aware of this fact, when he wrote me thus, in a letter dated 1st July, 1847:—"Mr. Cliffe and myself are anxious to *retain* you as manager." Will Mr. Roberts now deny his own handwriting?

3. Mr. Roberts dismissed me, and throughout he was the acting and corresponding executor, and, I presume, acted for himself and Mr. Cliffe by joint consent. Mr. Roberts is in possession of letters of mine, wherein I reply to his request, to name the terms upon which I was willing to *continue* as manager.

4. I refer Mr. Roberts to the correction of the editorial error, which led to the false construction which he here seizes upon. If Mr. D. Mushet, jun., filed the bill in Chancery, *partly* in consequence of my being entrusted with the management—how comes it that Mr. D. Mushet, jun., has covenanted in a deed, bearing date 17th Sept., 1847, executed soon after my dismissal, to support and sustain *me as manager*, or *receiver*, under the Court of Chancery? Is it rational to suppose that a man of finished education, and high talent, like my brother, Mr. D. Mushet, should first file a bill in Chancery, because I was obnoxious as the manager, and then execute a deed to perpetuate my managership?

5. My reply to this head is an extract from the letter of my eldest brother, Mr. Wm. Mushet, dated 20th March, 1848, addressed to myself, at Coleford:—"It was proposed (before the Court) that the executors (Cliffe and Roberts) should manage, and be paid for so doing. On this James Russell, Esq., my counsel, objected, and proposed either you or me, as fitter than a clergyman, living in London. So, after a few remarks, the Vice-Chancellor nominated you."

6. To this I reply by another extract from a letter, dated 11th March, 1848, and addressed by my eldest brother (a legatee to the extent of 4-9ths of the property) to me, at Coleford:—"With regard to your dismissal, it was done behind my back, and without any consultation with me, and at the time Mr. Roberts professed to be on good terms with me. It is, therefore, remarkable that he took no counsel with me, but took care to do his deed secretly, and before he wrote to me about it. This was not the conduct of a friend to any party." With respect to my *other resources*, and the *rest of my property*, to which Mr. Roberts states that I am driven to look for an income—he well knows that every paper and every deed relating thereto is in his possession, as executor, and that a property without a title can be no source of income to me. I challenge him to deny these facts.

7. If the executors were answerable to the Court of Chancery, why did they dismiss me *without* the sanction of that Court? And if they were answerable to the legatees—viz., myself, my late partner, and my eldest brother, why did they dismiss me *without* the sanction of these the legatees? However heinous my offence against the executors, or against my own property—whichever way Mr. Roberts is inclined to construe it—surely, in such an all-important step, the executors should have sought the sanction of those to whom they were responsible.

I would, in conclusion, ask one simple question of Mr. Roberts. Can he conscientiously affirm that either he himself, or his co-executor, Mr. Cliffe, is a fit person to manage a colliery? Has their education, or their pursuits, ever led them to be familiar with operations wherein men's lives are at stake, and are often sacrificed through inefficient management? And if they, the executors, have not been familiar with colliery operations, or mining operations in general, were they either of them justified in incurring a grave responsibility, even with the praiseworthy motive of avoiding the *weightier expense* of a receiver, by taking upon themselves the active duties of a mining superintendent? Having thus fully vindicated myself, I shall not, in future, condescend to notice any further attacks which may be made upon my veracity by Mr. Roberts.

Coleford, Sept. 6. ROBERT MUSHET.

[The correspondence on this subject must here definitely close. In its re-opening, we were only anxious to allow Mr. Mushet to explain a few points he considered had been imperfectly stated, and placing his conduct in an erroneous light before the public, which could be rectified on explanation. This done, and each party having replied, we consider the discussion had better end, as possessing no further interest with the public, and only provocative of unpleasant feelings to the writers themselves.]

TRANSMUTATION OF METALS.—Although the days of the alchemists are gone, the alembic of Nature is still in operation, and changes in the material of which this globe is composed are continually going on; perhaps, in many instances, unobserved. We are led to these remarks from a specimen we saw lately of an umquhile cast-iron pipe, that had been used in this neighbourhood for carrying gas, and had been laid some years in a peat soil. The cast-iron was completely changed into black lead or plumbago. It stained paper the same as a pencil. Its specific gravity had been reduced from the common gravity of cast-metal—say 7·7 to 2·06. The original thickness of the pipe we have no means of ascertaining, but we should think it a good deal increased. Whether the carburetted hydrogen alone can produce such changes, or if it is a combination of that and the peculiar soil we cannot tell; but, as we believe the pipes in many places here have given way, those connected with the gas management should look into the matter, and see if something could not be applied to the pipes before they are put down, to prevent the constant loss and trouble attending this natural source of decay.—*North of Scotland Gazette.*

ASHBURTON MINING DISTRICT.—While we are all deploring the falling off in our staple trade—the woollen business—it is cheering to find a new branch of industry gradually making head amongst us, which is likely to keep our surplus poor employed, and turn to profitable account for the enterprising. Gratifying indeed must it be to find some of our neighbours who have hoarded their gold coin, drawing them out to aid in producing some of the less valuable metals. Long have we wished to see those who are most interested in the benefits arising out of works of industry and enterprise in this neighbourhood, participate in and promote the same, and most heartily do we congratulate the tradespeople, as well as the working classes of this and the adjoining parishes on this new era; at a time when the more desponding would fain leave a neighbourhood to take care of itself, from which "the light of other days had faded." The new lustre, however, with which it is likely to shine and derive fresh glory, has been for upwards of a century attempting to cast its rays around us, and only wanted some trifling native aid to burst upon us with the brightness of day. The great master of chemistry had bountifully furnished the materials—Nature, with her wonted liberality had provided the power, which only required the handicraft of man to set in motion, aided with a little lubricating material to keep it in progress, and bring to light a hidden treasure, which had for ages been pent up beneath the crust of the earth, a useless talent. Some foreigners had scratched in hopes of finding it, and fragments had been found, with further indications that a little deeper scratch would lay bear the vein. Friendly aid from our sister town, Tavistock, had been called in on more occasions than one, to direct the searching, whose words were full of encouragement; but the means were wanting, and the desired object was not attained. Plymouthian aid was also called in, and the possessor of that richest of all love—the "Virtuous Lady"—was induced to forsake periodically this oft desired object in quest of the long hid wealth. He was at length discouraged by the cold indifference with which he was received by the interested of the neighbourhood, and ultimately discontinued his search. At last a light has dawned upon those whose business, as well as pleasure, it should be to seek out new resources of investment to employ the labourer, and glad indeed will every lover of industry be to find that success is attending their efforts. Yes, already does the metal glitter before the native energy, and the declining woollen manufacturer, whose heart and pocket were ever open to relieve the needy, is in a fair way of replacing his "tin;" while the sturdy yeoman, who has been bold enough to let loose his purse strings, will soon require a larger "nankeen bag" in which to deposit his dividends. It has been unequivocally pronounced by the well versed in mining, that as much metal might be expected on this side of Dartmoor as has been found in the Tavistock and Callington districts, the immense loose stones of tin found in the vales adjoining Dartmoor—in the parishes of Holne, Buckfastleigh, Dean, and Ashburton, and the various lodes which have been discovered, fully warrant such an opinion, and it only requires the spirit of enterprise to develope rich lodes and profitable mines.—*Plymouth Journal.*

ACCIDENTS.

Great Lumley.—As J. Turner was proceeding from the workings towards the shaft of Cocken Pit, he was knocked down by the first of a train of 12 laden rolley-waggons, two of which passed over him, and a third remained on his back. He was taken home, where he died about two hours afterwards.

Coneygreaves Iron-Works, Dudley Port.—A. Whitehouse met with a frightful death here—he was assisting to empty a waggon of iron at the top of the furnace, when the plate on which he was standing suddenly broke from the weight of the lode, and the ill-fated man was precipitated to the basement of the furnace. He was so dreadfully injured by the fall, that he died in about an hour and a half.

Shelliston, N.B.—A travelling tinker, named Gibson, fell down the Carolina Pit on Monday evening last; the baskets hung all night in the shaft broke his fall, but he lies in the Royal Infirmary, so much injured, that he is not expected to survive.

Accident to Mr. Robert Stephenson, the eminent Engineer.—An accident, which providentially was not attended with any serious consequences, occurred on Wednesday last to this celebrated engineer at the Conway station. It appears, that on the arrival of the express train from Bangor, it was deemed necessary to join another first-class carriage to the train. The parties were in the act of pushing the carriage across the down line, when the express train from Chester was observed to be coming along at full speed, and the men, to avoid the danger, left the carriage, and, as it afterwards appeared, before it was quite clear of the line. Mr. Stephenson, in company with a friend, Mr. Lee, had previously seated himself in this vehicle. In a few seconds the Chester express train came up at a great speed; the engine caught the projecting corner of the carriage, throwing the whole about a yard from the rails, smashing the wheels, glass door, and a portion of the framework in pieces. Immediately after the concussion, Mr. Stephenson was seen descending the steps, and was observed to fall on his back. He was instantly taken up and supported to the station by Mr. Lee and Mr. Swinburne. It was found that he was much stunned and rendered almost unconscious by the shock and fall, but we are happy to say that in a short time he was able to walk to the Castle Hotel, and the next morning he left for Chester. Mr. Lee escaped without injury, as, seeing the train approach, he pressed his back and feet to the sides of the carriage, and thus escaped. Great excitement was caused when it was known that Mr. Stephenson had had so narrow an escape from severe personal injury.

Mining Correspondence.

ENGLISH MINES.

ANTIMONY AND SILVER-LEAD.—Capt. Charles Williams (Sept. 5) reports—We have secured our shaft, and are proceeding with sinking it. Our tributers have taken a fresh pitch, and are doing well. I will write you further next week.

BARRISTOWN.—Capt. T. Angove (Sept. 1) reports—In the 16 fm. level end east the lode is very irregular, but towards the bottom of the end it looks better; it is about 16 in. wide, with a good mixture of lead through it. We are sinking the eastern flat-rod shaft, which will intersect the lode about 9 fathoms under this level; should it continue its present underlay, we shall sink this ground in two months. In the adit end east the lode is greatly improved; to the east of the slide it is 5 feet wide, with a good mixture of lead through it, and a solid branch of lead, about 6 inches wide, on the foot wall; in fact, it looks better than we have seen it for 40 fms.; we have driven this end upwards of 100 fms., on a fine gossan lode, from 2 to 4 feet wide, and producing from 3 cwts. to 1 ton of lead to the fathom, for the whole of that extent. I consider the end, at the present time, is producing over 1 ton per fathom.

BEDFORD UNITED.—Captain J. Phillips (Sept. 6) reports—At Wheal Marquis we have completed fixing new plunger-lift from the 90 fm. level to the 47 fm., or adit level, which is now working extremely well, and we hope will fork the water by the end of this week. The shaftmen are at present engaged repairing engine-shaft and footway. In consequence of this necessary and important alteration in the pitwork having thrown the water in, there has been little or nothing done in the 90 fm. level since last report. The lode in the 80 fm. level east is 4 ft. wide, and will produce from 3 to 4 tons of ore per fm. There has been no lode taken down in the 70 fm. level east since we commenced driving.

BUCKFAST MOOR TIN MINE.—The mine captain, under date Sept. 5, reports—We have now recommenced operations, and discovered, on the north lode, a very valuable course of tin, about 24 ft. from surface, worth 50*l.* per fm. for tin; this lode is quite a new discovery, in fact, only just opened upon. On the south lode, with extensive workings at surface, several rich courses of tin have been discovered, worth from 10*l.* to 50*l.* per fm. for tin. From this a calculation can be made of the quantity of tin that can be returned per month, after the water being drained off those lodes.

CWM ERFIN.—Capt. S. Nicholls (September 2) reports—In consequence of an overflow of water being in the mine the first four days of the week, the men in the 20 fm. level could not proceed with their work. The stope, west of engine shaft, is looking better than when last reported on, and we have to day drawn up some good stuff from the shaft. The rest of the bargains continue much the same as last week. The computed 20 tons of lead have been purchased by Messrs. Newton, Keates, and Co., at 12*l.* 11s. 6d. per ton.

DEVON AND COURTENAY CONSOLS.—Capt. N. Seccombe (Sept. 5) reports—In our 40 fm. level, driving west on the gossan lode, the lode is 2 ft. wide, composed almost entirely of mundic and peach; the lode in this end is much more regular than before; in our end, driving east on the south lode, in the same level, the lode is 2 ft. wide, producing also large quantities of mundic and peach. In our 50, the men are extending the level north on the cross-course.

EAST CROWNDALE.—Captain S. Paull (Sept. 2) reports—The lode in Diamond's engine-shaft is at present disordered, by floors of elvan passing through it; it is composed of spar, peach, mundic, iron, elvan, and spots of tin; the ground is changing a little for the better. In the adit level driving west on the course of Thomas's lode, we have not taken down the tinny part in the past week; the part of it we are now carrying not containing tin enough to save for the stamps, we are obliged to keep separate. In my next you shall have a particular account of the size and quality of the part of the lode now standing, which in sight is very good; the lode in the stopes, in the back of this level, is 7 ft. wide, composed of peach, prian, spar, mundic, killas and tin, and worth about 25*l.* per fm. We have not as yet began to collar up Thomas's shaft, on the course of this lode, having been obliged to clear out ground further south than the old men's workings, the lode in this place being near 12 feet wide. We have tin at the end of August, ready for burning-house, calculated to be 5½ tons, when cleared.

GREAT MICHELL CONSOLS.—Capt. T. Richards (Sept. 6) reports—The lode in the 45 fm. level, west of the sump-winze, contains mundic, spar, and capel, and in places producing good stones of ore. In the 35 fm. level, west of the sump winze, the lode is without important alteration, containing mundic, spar, and prian, with a small proportion of good quality ore, the ground still continues favourable for driving.

HOLMBUSH.—Capt. W. Lean (September 5) reports—The ground in the Diagonal shaft, sinking below the 132 fm. level, is favourable, being set at 13*l.* per fm.; the lode in the 132 fm. level west is 18 in. wide, composed of mundic, spar, and spots of copper ore. The lode in the 120 fm. level south is 4½ ft. wide, composed of quartz, white iron, and lead, worth 5*l.* per fm.; the lode in the stopes, in the back of this level, is 4 ft. wide, producing 3 cwt. of lead per fm. The lode in the 110 fm. level south is 3½ ft. wide, composed of quartz and stones of lead—saving work; the stopes in the back of this level are at present poor; the lode in the 100 fm. level south is 2 ft. wide, composed of soft spar, prian, and lead, about paying the cost for exploring, and leaving tribute ground in the back and bottom of the level; the Flap-jack lode, in the same level east, is 20 in. wide, composed of mundic, blende, and spots of ore—ground favourable, set at 4*l.* per fm.; we have driven 29 fms. on its course, and expect soon to intersect the great cross-course. We have sampled a parcel of silver-lead ores, computed 33 tons, samples of which have been sent to the smelters, to be tendered for, agreeable to circular.

KIRKCUDBRIGHTSHIRE.—The agent (Sept. 2) reports—The lode in the 50 end, west of Stewart's, is still large and kindly, but without any increase of lead as yet; in the 50 end east, on the north lode, the lode is about 1 ft. wide, with a regular south underlay, about 18 in. in the fm., and a good branch of lead, yielding about 8 cwts. of lead per fm. The lode in the 40 end, west of Keith's, is still large, with a deal of jack and sulphur in it, and a small rib of lead just coming in; the lode in Keith's shaft is improving both in size and quality, and is now worth ½ ton per fm. The lode in the 30 end, west of Keith's, is somewhat larger, but still unproductive; the lode in the 30 end, east of Stewart's, is again improving, yielding about 5 cwts. of lead ore per fm.; the ground has improved in the winze under the 30, and also a good stone of lead come in, worth 8 cwts. of ore per fm. We have a cargo of lead ready, and are expecting the vessel in the course of a day or two.

LEWIS.—Capt. S. S. Noell (Sept. 2) reports—The lode in the 70 east is 1 ft. wide, yielding some tin, and very promising; the lode in the 70, west of sump-shaft, on south branch, is 8 in. wide, worth 14*l.* per fm.; the ground in the 70 south is hard. The lode in the 60 east is 2 ft. wide, saving work for tin; the lode in the 60 east, on south branch, is 1 ft. wide, worth 6*l.* per fm.; the lode in the 60 west, on south branch, is at present unproductive; the lode in the winze, sinking under this level, is 3 ft. wide, worth 30*l.* per fm. The lode in the 50 west, on south branch, is 6 in. wide, opening good tribute ground; in driving about 3 fms. south, from south branch, in the 50 fm. level, we have intersected a lode 6 in. wide, producing some very good quality tin-stuff. The lode in the 40 east is 18 in. wide, saving work for tin; the lode in the 40 east, on south branch, is opening ground that will work at about 10s. tribute. The south lode, in the 20 east, is 1 ft. wide, worth 5*l.* per fm.

MENDIP HILLS.—Capt. F. C. Harpur (Sept. 4) reports—The appearance of the lode in the 38 fm. level, south of shaft, continues without the least alteration whatever, composed of flookan, spar, and iron, carrying two very regular walls—ground rather hard for driving. In the slag department, we have worked the furnaces, during the past week, four days, the produce of which continues about the same as formerly. I hope, in the course of a few days, to get another good pile of slags prepared, as it affords me satisfaction to inform you, we find a gradual improvement in the work as we proceed towards the eastern part of the valley; the beds of stuff through which we are at present laying open the cutting is about 13 ft. thick, intermixed with slags throughout.

RHOSWIDDOL LEVEL MINES.—The following is an extract from the report of Capt. Davis, dated 1st of Sept.:—"The field shaft has again produced good orey ground in the eastern roof; it is more difficulty to cut as the roof approaches the field level. The lead diminishes as we roof up, but improves as we go down upon the lode; the ore we find 2 in. wide in the level, is 2 ft. in the shaft. We have nearly finished stoping the roof, but I am fully prepared for the men in another roof. The 10 fm. level has gone through orey ground, the same quality as the roof; this level has opened 80 fathoms of orey ground, on which the men will be engaged, in two bargains, next month. The smithy level has improved; the men have cut 8 yards through a nice piece of orey ground, which will pay for working. If this orey ground should continue another month, it will prove to be the same as at the Nant Lced shaft, which, you will recollect, I have reported as dipping towards this level. I yesterday set bargains on ore in the field level—one driving the 10 fm. level, another stoping the 10 fm. level, and a third stoping the 16 fm. shaft, which is a step lower than we have been in raising ore."

SOUTH WHEAL MARIA.—Capt. G. Francis (Sept. 7) reports—The underlay of the south lode being now evidently less than we at first calculated on, has, of course, lengthened our cross-cut. I am daily expecting to intersect it, when I hope it will be in my power to report most favourably to the shareholders on its prospects. The ground continues with little or no alteration, and driving about 6 ft. weekly. I am glad to say, that we often find good copper in the joints of the killas, which is generally considered a good indication just before we reach a lode.

SOUTH WHEAL TRELAWNY.—Capt. Wm. Jenkin (Sept. 4) reports—We are still driving the cross-cut, west of Snell's engine-shaft, with eight men. In the 80 fm. level the ground is favourable—in from shaft about 15 fms.

TRELEIGH CONSOLS.—Capt. W. Symons (Sept. 2) reports—At Garden's shaft, below the 100 fm. level, the lode is 3 ft. wide, composed of jack, mundic, and spar—more promising. In the 90, east of Garden's cross-cut, on the south lode, we are driving to cut a south part of the lode. In the 70, west of ditto, the lode is 10 in. wide, with but little mineral. In the winze below the 60 west, the lode is 20 in. wide—no ore to value. In the 50, west of Garden's cross-cut, the lode is 2½ ft. wide—but little ore. Wheal Parent engine-shaft is sinking in the country—the ground pretty favourable for sinking. The adit cross-cut north is driving to cut Wheal Orphan lode. East, on the middle lode, the lode is 1 ft. wide, with occasional stones of ore, not to value.

WHEAL TRELAWNY.—Cap. J. Bryant (Sept. 5) reports—Phillips's shaft, sinking under the 62 fm. level, will be down to the 72 in the course of a week or 10 days; the lode in the 62 fm. level north is 3 ft. wide, and worth 8*l.* per fm.; the lode in the south end, in this level, is at present small, producing good stones of lead—but, from the abundance of water in the end, we expect an improvement here shortly; the stopes, in the back of this level, are looking well. The lode in the 52 fm. level, north of Phillips's shaft, is 2 ft. wide, composed of can and lead, worth 11*l.* per fm.; the lode in this level south is 1½ ft. wide, and worth 6*l.* per fm.; the stopes, in the back of this level, are looking very well; the lode in the winze, sinking under the 52, south of Phillips's shaft, is 3 ft. wide, composed of can, with good stones of lead, and improving daily; the lode in the 52, south of Trelawny's shaft, is large, and worth 15*l.* per fm. We have not extended north of the cross-cut, in this level, as yet, for want of room in working; but hope to commence in the course of a day or two. The lode in the 42 fm. level, north of Trelawny's shaft, is 2 ft. wide, chiefly composed of can and lead, and worth 7*l.* per fm.; the rise, over this level, is holed to the 32; the stopes, in the back of this level, are producing a fair quantity of ore; the lode in the winze, sinking under the 42, north of Trelawny's shaft, is 2 ft. wide, and worth 8*l.* per fm. The 22 cross-cut, east from Trelawny's shaft, is still in driving by four men, and without alteration. At the north mine, in driving the 30 fm. level, north of Smith's shaft, during the past week, we have met with a slide, which has disordered the lode; and, having driven through it, find a branch, containing can and lead, and producing a great deal of water, which indicates our having a good lode northward; in consequence of water in the winze, to the south of this shaft, we have not yet resumed sinking it.

WEST WHEAL JEWEL.—Capt. R. Johns (Sept. 4) reports—In the 70 fm. level, west of Williams's cross-course, on Wheal Jewel lode, the lode is 15 in. wide, worth 8*l.* per fm.—driven last month 2 fms. 1 ft. 6 in. In the 57 fm. level, west of ditto, on the same lode, the lode is 3 ft. wide, worth 6*l.* per fm.—drove 2 fms. 3 ft.; in the 57 fm. level, east of ditto, on the same lode, the lode is unproductive—drove 1 fm. 1 ft. 6 in.; in the rise, in the back of the 57 fm. level, on the same lode, the lode is 3 ft. wide, worth 8*l.* per fm.—rose last month 1 fm. 5 ft. In the 47 fm. level, west of Williams's cross-course, on the same lode, the lode is unproductive—drove last month 1 fm. 3 ft. 1 in.; in the deep adit, west of Hodges's cross-course, on the same lode, the lode is 6 in. wide, producing stones of ore—drove last month 1 fm. 2 ft. 6 in. In the 30 fm. level, west of Quarry shaft, on Tolcarne tin lode, the lode is 18 in. wide, poor—drove last month 1 fm. 5 ft.; in the deep adit, west of Quarry shaft, on the same lode, the lode is looking more promising for tin—drove last month 1 fm. 1 ft. Tregoning's shaft is communicated to the shallow adit level—sunk last month 1 fm. 4 ft. 6 in. The stopes working on tribute in the back of the 12 fm. level, east of Pryor's winze, is worth 27*l.* per fm.; the stopes working on tribute in the back of the 12 fm. level, west of Pryor's winze, is worth 30*l.* per fm.; the stopes, in the bottom of the 12, are working on tribute, worth 25*l.* per fm.

FOREIGN MINES.

COPIAPO MINES.—The following report has been received from the mine captain, dated Copaipo, June 29:—"The Checo Mine presents, at this time, very encouraging prospects at several points where we have recently commenced some exploring operations, which induces me to hope that, in a few (say, three or four) months, it will assume a better position, as regards prospects and produce, than for some considerable time past. I visited the mine but a few days since, and I think I never saw a lode more promising to lead to a large bunch of ore than the one in the winze that we are sinking below the 30 fm. level, to the east of Harman's shaft; it is more than 6 ft. wide, and yielding large stones of excellent ore—one stone that I saw broken was more than 1 cwt., of 30 per cent.; and I cannot believe that such large stones are there alone—I mean without leading to a large and rich bunch, and that not very distant. The 35 fm. level, at the west of the above-named shaft, looks exceedingly well also; the vein is 9 in. wide, and not less than 28 per cent.; and, from its appearance, there is every probability of its improving as we advance. On the north lode, we are still sinking the winze below the 12 fm. level, and have such a large and fine-looking vein as we but seldom see; it is 12 ft. wide, composed of iron pyrites and stones of ore, scattered in different parts; those we find embedded in bunches of soft gossan; it is absolutely one of the prettiest lodes I ever saw; although but a small quantity of the ore yet produced from this vein being of a quality that would pay for shipment to England, I am in great hopes of a favourable change. We have also commenced the sinking of a new winze, on a vein to the south of the main vein, and have a very pretty branch of green copper ore, about 6 in. wide. I have had this ore assayed, and it yields 20 per cent. From the several places above named, we have raised the greater part of our produce here; for, as you must be aware, from what has been written to you before, the old stopes and pitches are pretty well exhausted.

"*Esperanza Mine.*—This is a mine, although entirely new, that, in my opinion, possesses great merit, and I hope, in a few months, to give you convincing proofs of it. I was there a few days since, and was more than a little pleased and delighted with the appearance. We have commenced operations at two different points—the one sinking, and the other driving into the hill—both on the lode, and about 40 fathoms apart. The end, or level, will come in, and communicate with, the shaft at a depth of about 20 fathoms. At the first-named place, where we are sinking, we have a very fine lode, about 3 ft. wide, 2 ft. of which is ore, that will produce 15 per cent. of copper, and not more than 9 ft. below the surface; the ore is a green carbonate and red oxide of copper combined, and it contains, also, a pretty good portion of iron; but this, I think, will leave it as we get deeper, and the ore greatly improve in quality; we find some few stones already, 20 per cent. I have had two or three samples of this ore assayed, to resolve doubts, being rather of a different class from any that we have in the mines of the company. In the level, we have only driven about two varas; the lode is large, 4 ft. wide, composed of a beautiful gossan, with fine spots of ore. I hope I shall have to report favourably of it in my next.

"*San Pedro Mine.*—The 10 fm. level, on the north lode, is greatly improved since I last addressed you; the vein is now 15 in. wide, of rich ore, but the ground is rather harder than we had expected, which prevents our making as much progress as we could wish. The new 15 fm. level, on the same lode, driving east, has also improved; we have now a regular branch of rich ore, 6 in. wide, with every prospect of its widening as we extend the level. The 10 fm. level, on the main lode, has a very pretty appearance—ground soft, vein becoming gradually wider, but not as yet very rich, I think about 20 per cent. Should the above-named places continue for a few months, so as to lay open new stopes, we shall then be able to increase the produce. Where we are sinking, on the same lode, we have some good stones of ore, and have taken out about a ton in last month; and I am in great hopes that, as we get deeper, the rich part of it will grow wider. It certainly has a very promising appearance, and a few months only will be required to ascertain what it is likely to do.

"Produce at San Pedro, for May, 31 tons; ditto Checo, 33 tons; ditto Farellon dressed ore, 12 tons=76 tons.

"The *Avoca*, 330, was expected at Copiapo in a few days, to load a cargo of copper ore; and the *Jenny Jones*, 530 tons, had arrived at Valparaiso, and would load at Copiapo shortly after."

IMPERIAL BRAZILIAN MINES.—*Gongo Soco, June* 23.—I am happy to acquaint you with the safe arrival of our large troop from Rio, bringing all the heavy pumps. Both people and animals are in excellent condition, and reflect the greatest credit, both on Thomas Gray who commanded, and on Julian Thoria who had charge of the troop. The better portion of the superficial rubbish at Gongo is becoming exhausted, and our small returns are, consequently, diminishing. At Bananal, the Tamandua cross-cut continues to penetrate rubbish, but indications of an approach to the rock are now appearing. A stream of water in Hollingsworth's shaft has prevented our continuing to sink it; but as the drainage of Thomas's shaft proceeds, the pool in Hollingsworth's subsides; and we hope, in a few days, its entire disappearance will enable us to resume sinking. We are still driving the shallow adit from this shaft westward, and seem to be approaching the limits of the jacotinga; but nothing worthy of notice has yet been seen here. The high ground in the bottom of the deep adit has been so far stoped away, that all the water of the mine now flows through it; we have, therefore, dispensed with all the lifts which had, until now, drawn the water above this level, consisting of two, in place of the large old pump—one in Walker's, and one in Gibson's shaft. Catta Preta wheel is, therefore, idle, although it will be soon required at Hollingsworth's shaft, and the old wheel, which has undergone thorough repair, now two lifts in Thomas's shaft only, and thus lightly burthened, will command its load for a considerable time, especially as much of the water from this point now drains through the ground to Walker's shaft. A little yet remains to be done in the adit, but this will all be completed before my next. We are now driving the deep adit level northward from Walker's cross-cut, and southward from Thomas's shaft; the vein in both gives samples of gold, but is at present very hard. Walker's shaft is being sunk below the 7 fm. level, and is now 9 ft. below it, and continuing to go down well. The 7 fm. level from this is rapidly advancing towards Thomas's shaft, from which it takes abundance of water. The old wheel was set at work on the 20th inst., and on the following day Thomas's shaft was drained so far as the rubbish in the bottom permitted; to remove this, however, and to excavate and secure some ground on each side of the vein, will require a week or 10 days more; but by the 1st July

we shall be again at work on the vein here. The Big Pump vein, intersected by the deep adit, is quite dry, as also is the pit sunk in it below the deep adit level. We commenced removing the rubbish out of this on the 21st inst., and I am in hourly expectation of hearing how it looks in the part whence the old proprietors were driven by the water, and in which it is said gold was left in sight. To expedite the extension of the adit northward from Walker's shaft towards Tamandua, we have commenced preparations for a new shaft, which we beg permission to name "Goldsmid's." Everything goes on well, and the ensuing half-year will throw considerable light on the prospects of your new undertaking, which we all sincerely hope will fulfill your expectations.

July 3.—I am much indebted for the hint you gave me. The spot indicated (at Bananal) is that which we are now sinking. Hollingsworth shaft to try; it is universally spoken of in the most flattering terms, and I only wish the discovery of gold there may be as certain as is our ability to explore it. If these riches are to be found, I think we shall find them. At Bananal, our Tamandua cross-cut is still penetrating rubbish. The cross-cut, westward from Hollingsworth's shaft, in the shallow adit, is still in progress, but nothing worthy of notice has been found in it. Hollingsworth's shaft has not been thoroughly drained, by our having drawn all the water out of Thomas's. We are, therefore, applying to it the pumps released from service by the opening of the new adit, and these will be worked by the Catta Preta (Gibson's) wheel; in about 10 days we hope the regular sinking of this shaft will be commenced. The deep adit level, southward from Thomas's shaft, towards Hollingsworth's, is again in a hard rock; our progress is but slow, and the vein presents nothing worthy of notice. The vein in the same level, northward from Walker's cross-cut, towards Goldsmith's shaft, is so hard and unpromising, that we have abandoned it, and commenced driving in the same direction, on a parallel vein, which, if not much more kindly, will, at least, enabled us to open a communication more cheaply and rapidly. Goldsmith's shaft is about 2 fms. deep, and we are sinking it with all practicable speed. Walker's shaft is being sunk below the 7 fm. level, and as we have now perfect command of the water, our progress is regular. The 7 fm. level, between this and Thomas's, proceeds rapidly, and drains the latter as it advances. Thomas's shaft is drained, but we have to make it larger, and secure its sides in the deepest part, before we can again touch the gold vein; but all this will certainly be done before I have again the pleasure of addressing you. Since my last, we have made some trials on the big pump vein, and have found gold in it; it is, however, nowhere rich, and everywhere small, but portions of it have a favourable appearance. The same vein has been seen in our 6 fm. level, south of Thomas's shaft, and we have commenced rising on it from thence, but it is small and unkindly. A small box of work, from the workings hereon, in the adit level, has been washed, and gives between 8 and 9 ozs. of gold, which shall appear in our next ten days' returns. We are now in a situation to give the vein at Thomas's a fair trial, interrupted only by the needful taking away ground near it, and by sinking the pumps; it is, therefore, a most anxious time with us. You may rely that all circumstances permit shall be zealously and industriously done. At the moment of closing this, a letter from the captains of Bananal has arrived with information, that in course of sinking a pit for the pumps at the bottom of Thomas's shaft, they have broken two boxes of work; it is, however, of very inferior quality, but even this I had not hoped for so soon. Gold workings—Gongo Soco, for the half year ending 30th June, 86 lbs. 4 ozs. 7 dwts.; Bananal, ditto, 3 lbs. 1 oz. 13 dwts.

NATIONAL BRAZILIAN MINES.—*Cocaes, June* 22.—Some few days ago, in opening above Chegwin's cross-cut, to widen the new filling place, there was a good sample taken from near the foot wall of the lode; and, by further search, a small but good vein was discovered in that vicinity, which still lies untouched from that place upwards to an old working, lately discovered, and downwards it is entire.

Produce—Cocaes, 4th to 13th June	*Mks.*	6	1	6 5
„ Culabo, 6th to 16th June		4	5	5 12
Total, 10 days	*Mks.*	10	7	3 17

Culaba, June 26.—Although we have not obtained as large a supply of ores as during the previous 10 days, yet I feel confident that everything has been done at the stopes that could reasonably be expected with our few hands; it may not be amiss to state, that since last post we have had very little more than seven working days.

Produce—Culaba, 16th to 26th June	*Mks.*	4	2	3 10
„ Cocaes, 14th to 24th June		5	3	4 13
Total, 10 days		9	5	7 23

Cocaes, July 4.—Capt. Bate is of opinion that the ores in course of extraction, both from Collett's and Hitchins's stopes, have presented a better appearance during the past day or two, and some encouraging samples have been taken from the former place. We are happy in being enabled to add, that it has rained rather heavily, and our tank is just full of water.

Produce—Cocaes, 26th June to 4th July	*Mks.*	5	7	1 55

ST. JOHN DEL REY MINES.—*Morro Velho, June* 17.—Gold extracted to date, 4134 oitavas, from 243·41 cubic feet of sand=16·97 oits. per cubic foot.

This produce, from the first 9 days' stamping, is the worst we have had for a long period; nor can I in any manner account for it, seeing that the stone sent to the stamps, if not very rich, has been of fair average quality, and the concentrated sand rather more than the preceding months.—Stamps working, average 67·16 heads.—The supply of stone has been abundant until the last seven or eight days, since when it has fallen off, in consequence of the absence of very many of our Brazilian borers and workmen, who are holiday keeping, in honour of Whitsuntide.

June 27.—*New Stamps.*—I have the satisfaction to inform you, that 18 heads went to work in excellent style, about mid-day, on the 22d. They were on that occasion christened in all due form, and I took the liberty of naming them the "Powles' Stamps," in honour of our highly respected chairman; nor will they apparently disgrace the name they bear—for not only John Rouse, but Capt. Treloar, Capt. Goyen, the English stampsmen, and, in fact, every person here capable of forming an opinion, are unanimous in declaring, that they are the finest and most complete set of stamps ever erected in Brazil. The 50-ft. wheel is particularly admired; and the whole machine is said to reflect the highest credit on John Rouse. The other 18 heads will now be pushed forward with all convenient speed, but I fear will not be completed before the middle of August; and, in the meantime, the 18 heads actually at work will be employed solely on the refuse stone, which it is supposed will yield not more than 1 to 1½ oits. per ton.

Breakage on the Chrystaes Rego.—To counterbalance the foregoing favourable intelligence, I have the painful task of informing you that, since 2 o'clock on Sunday morning, the 24th inst., the entire body of water supplied by this rego has been lost to the mine, in consequence of a tremendous breakage, whereby upwards of 22 fms. of the said rego have been washed way; and that in a place, where the difficulties of the ground are so unusually great, as to render it nearly (though, happily, not quite) impossible to support the launders, which it will be necessary to carry across the chasm. You may be assured, that every possible exertion is being used to re-establish our supply of water; but, in the meantime, I am sorry to say, that above three-fourths of our stamps are quite idle, and that the few heads which are moving are doing little more than half duty. This unfortunate state of things must continue till to-morrow (Wednesday), depriving us of the produce of 3½ days' stamping, which cannot be estimated at less than 1800 to 2000 oits. of gold. Gold extracted to date, 9877 oits., from 539·11 cubic feet of sand=18·32 oits. per cubic foot. Stamps working, to 27th instant, average 61·93 heads of old stamps; new stamps, 12·8 heads. The supply of stone has been latterly somewhat impeded by the number of holidays.

July 8.—*Chrystaes Rego.*—On the evening of the 28th ult., the water for this rego was again brought on the mine—not, however, before we had lost nearly four days' stamping, besides the derangement of the works of the whole concern, as well in the mine as on the surface. The entire force of the establishment, as well blacks as whites, as well mechanics as common labourers, with the exception of a few who remained in the mine, being necessarily employed in the re-establishing the supply of water. Even after the water was brought home to the mine, a large force of mechanics and others was still obliged to be left on the rego for three or four days more, in order to secure the work which had been accomplished. In consequence, the works at the new stamps, amalgamation house, &c., have been, during the whole of the time, completely stopped; yet after we had, by such great sacrifices and such heavy expense, made everything, as we hoped, tolerably secure, a fresh breakage of the rotten ground took place, at a little distance from the scene of the former disaster (see diary, of 3d, 4th, and 5th). Again our old mine works were stopped, or thrown into the greatest confusion; but, by the indefatigable exertions of all parties, we have this time escaped with the loss of only about 18 hours' stamping. I trust, we are now tolerably secure for the present; but the precipitous ground, on the edge of which the whole of this portion of the Chrystaes Rego has been formed, has shown itself to have become so thoroughly rotten and insecure, that Capt. Treloar says it will be absolutely necessary, for the safety of the concern, to make a new channel for the water in sounder ground; to effect which, however, we must undertake a tunnel of 150 to 200 fms., and which, I need hardly say, will be not only tedious, but heavily expensive. During the whole of these unfortunate occurrences, it is gratifying to have to report the great exertions and admirable conduct of all parties, particularly of Capt. Treloar and John Rouse, who were indefatigable in their superintendance, as well by night as by day.

Produce for June, 14,235 oits. = 136·75 lbs. troy, from 3878·4 tons of ore, yielding 3·67 oits. per ton; 32·3 oits., received as tribute from Feixos—total, 14,267·3 oits. = 137·6 lbs. troy. This produce, compared with what we have been accustomed to for some months past, though at first view it appears bad, yet is quite accounted for by the occurences on the Christaes rego, which deprived us of at least 2000 oits. of gold, independent of the still unexplained diminution in the account obtained from the first nine days' stamping; should we be fortunate enough, however, to avoid any further untoward accidents this month, I entertain strong hopes of compensating, at least in part, for the diminished produce in June. Stamps working during the month, average 59·54 heads of the old stamps, the new stamps average 14·78 heads for 8½ days; but it must be observed, that such stamps as were enabled to keep in motion during the absence of the Christaes water, did, in fact, but very trifling duty during that period. The total amount of stone sent to the stamps this month was about 3878 tons; but of this about 317 tons was refuse stone supplied to the Powles's stamps, leaving only 3561 tons of the usual description; and, supposing the refuse to yield 1½ oits. per ton, the ordinary stone averages only 3·86 oits. per ton. I purpose having some days' stamping of this refuse stone separately amalgamated, and burnt off, in order to ascertain, with something like accuracy, what its real value may be.

Supply of Stone.—You will see, by the monthly mine report, that we are now obliged to commence leaving a pillar in the middle cachoera for the safety of the mine. It will, in consequence, be 4 or 5 months before we can work to the usual extent; that the most productive portion of the mines, and the supply of stone to the stamps, would, during that period, have suffered a sensible diminution, had we not, by the increase of our force, been enabled to supply Capt. Treloar with nearly 40 additional borers, which will enable him, though working in less productive parts of the mine, to maintain the amount of his supply at the usual rate. Of the said reinforcement, 25 borers have been already sent into the mine; 13 more will follow in a few days.

Cost for June, Rs. 34,921 8696 at 26	£3783	3	8
Produce, 14267·3 oitavas; deduct duties, 7 per cent., 998·3 oitavas—net oitavas, 13,269, at 7s. 7d.	5058	16	2
Profit	1275	12	6

AUSTRALIAN MINING COMPANY.

SIR,—I shall be glad if, for the satisfaction of parties concerned, you can find room in your next Number for the following extract from a letter I have received from Adelaide, written by a gentleman who had just returned from a visit to the mines of the Australian Mining Company, dated Adelaide, the 25th of April:—"At Tungkillo they have two lodes, one of which has an east and west course, and the other runs nearly north and south; at the junction of these they first cut a bunch of copper ore, at about 30 fms. deep, their previous operations had been merely on indications and spots of ore; the shafts and cross-cuts upon the east and west course, at a greater depth, have now proved the property, and so far can be safely depended upon; according to Captain Phillips's estimate, 1400*l.* worth of ore was extracted during the month's operations. A small shipment of ore for account of the company, went per *Medway, viâ* Sydney, a few days ago. At Allen's Creek (Rothschild) the miners are sinking a shaft upon an immense iron lode, which they had just intersected; its dimensions are 15 ft., and in it are some good indications, which Cornish miners call "leaders to copper," consisting of a rich gossan. It would be premature to come to a positive conclusion respecting this property; though it cannot be doubted, should Capt. Philips's expectations be realised, that the Burra Burra will only stand second to this in magnitude, though it may be first in quality."—[I beg to refer you to my enclosed card.] J. P. P.

Notting Hill, Sept. 7.

GREAT SOUTH TOLGUS MINING COMPANY.

SIR,—This mine was set to work in 1833. At a meeting held the 4th March 1835, it was resolved to take a deed from the lord, which was drawn in the name of Samuel Cardozo, the counterpart of which I duly executed, retaining the original in my possession. Having secured this, I, in the following week purchased, on my own account, 68-128ths, which I continued to carry on, together with shares subsequently purchased by me, up to our suspension, making my interest fully *nine-teaths*—my individual expenditure thereon exceeding 1200*l.*; the said deed has never been revoked, called in, or forfeited, and under it quiet possession is held at this very hour. Having full power given me many years ago, by a resolution signed by *all the* adventurers, to make up a company to erect a 40-inch cylinder engine (which resolution has not been rescinded) I, after several trials in London and Liverpool, at considerable expense, at last succeeded, through Messrs. Painter and Co., sharebrokers of the latter place, who took all the risk and expense of forming a company in Oct., 1846. The prospectus issued in the month following shows the nature of the agreement, the rules, regulations, &c., the whole of which were frequently advertised in the *Mining Journal*. The shares were allotted on 19th Jan., 1847, and three days after three directors, all total strangers to me, were nominated, which I was apprised of by the following post, wherein it was stated desirable, that I should obtain every proxy possible in Cornwall and London—say, about 1000 shares issued—to confirm their election. I arrived in London for the purpose, on Tuesday evening, Feb. 2, 1847, at Anderton's Hotel, Fleet-street, when I soon discovered that 645 shares allotted in London, had not been paid on, nor were they likely to be, under a self-constituted directory wholly in Liverpool. The meeting at Liverpool being on Monday, the 8th February, I proceeded there with 350 votes, in support of the direction, and then had first sight of the parties, when it was resolved, that I should be the purser from that day, for the first year at 60 guineas.—That the offer of a 40-inch cylinder, for 600*l.*, by Mr. John Taylor, at Aberystwith, be accepted.—"That all shares not paid on, on or before Wednesday, the 17th Feb., will become forfeited to the general proprietary for re-allotment." Under these circumstances, and the board not wishing to keep too small a balance at starting in the bank, I was solicited to affix my signature to the assignment deed, and also to the receipt annexed for the consideration money of 500*l.*, receiving, in lieu of cash, the acceptance of Mr. Robert Taylor (one of the board) at three months, for 200*l.*, payable at the company's bankers, he taking a further 100 shares, 2*l.* paid thereon, as an equivalent; and for the "remaining sum due of 300*l.*," I took the written undertaking, as follows:—

"*Liverpool, February* 24, 1847.

"We hereby agree to pay Mr. Samuel Cardozo the remaining sum due of 300*l.* on the Great South Tolgus Mine account, when shares are sufficiently appropriated to enable us so to do, after meeting the liabilities previously incurred.

(Signed) "ROBERT TAYLOR; FREDERICK A. TAMPLIN, Directors."

The number of shares issued from the scrip certificate book are as follows; consequently showing that they might have paid me the 300*l.* at any time after the 1st March, and, at all events, on or before the 13th April, 1847:—

501 shares were issued, and 2*l.* paid thereon, up to Feb. 22, 1847			
100	ditto	ditto	to R. Taylor, on Feb. 24, 1847
25	ditto	ditto	to John Long, on March 17, 1847
10	ditto	ditto	to F. Hammell, on March 26, 1847
636, which is all they give credit for; but we find they had taken			
100	shares more on the 13th April, 1847, and 2*l.* paid, for Robert Taylor		
20	ditto	ditto	ditto for Mr. Bond
756			
500 free shares issued, and 2*l.* paid to Painter and Co. and myself—makes			
1256 out of 1500			

The full number of 1500 shares might easily have been re-allotted and paid upon, had the directors chosen to do so, rather than hold them, as they did, "for friends," in expectation of realising a premium.

On Saturday, the 27th February, a friend of mine, at Liverpool, took Taylor's acceptance for 200*l.* to his bankers, in order to get it discounted for me. It happened also to be Taylor's bankers, as well as the bankers of Great South Tolgus Mining Company. It was discounted by them, and honoured at maturity; but this solitary circumstance alone caused all our subsequent differences. Mr. Taylor, going to the bank on Monday, found what had taken place, *and vowed it had done him a worse injury than throwing* 500*l. in the Mersey!!!*—I should no longer hold the office of purser, if he could help it. Accordingly, on the Wednesday, he despatched away Mr. Painter, the secretary, to get to the mine before I could (being in London), and by no means to allow me to act, *or even see any of the books belonging to the concern*, but to keep them all locked up in his private ledgings; and this he continued to do until they suspended operations, and came upon the mine in August following. Even then I could obtain no satisfaction, or get an interview with them. As such, on the 28th of that month, I signed off upon the *original cost-book* all my 183 shares, as well as 100 more that I held proxies and represented, transmitting by post through the witnesses' hands a copy that evening to them at Liverpool, which they acknowledged and accepted.

My 63*l.* salary was to commence from the 8th of February, 1847. The notice, that *my duties, as purser, were to cease from that day*, was dated the 8th of April—had the Liverpool post mark the 13th—consequently, reached my hands on the 15th; but I have not received one penny of it, which is not alone the hardship, for I am actually debited with a *large proportion of the unjustifiable charge* of 80*l.* to Mr. Painter, who supplanted me; and 50*l.* to Capt. W. Sincock, who supplanted him, or attempted it; about 40*l.* more in horses, gigs, and expenses incurred by them riding about from place to place, pretending to look for other materials required for the mine; attending together at all the sales advertised, for refreshments, &c., too much to specify = 170*l.*

All this, in face of rule 5 of our printed regulations, that in the event of the death, discharge, or relinquishment of any officer of the company, the vacancy to be filled up at the first general meeting, or a special meeting, called for the "purpose," and yet no such meeting has been called, or held. As such, I demanded my first half-year's salary (31*l.* 10s.) on the 8th of August, 1847, and the second half on the 8th of February, 1848, all to no effect; *they never answered any letter from me from first to last*, nor noticed my written protests against the interference of Painter and Sincock. Nor have I been able to get them to value the materials to the end of Aug., according to the custom usually adopted. In Sept., they took an inventory of the effects, which Mr. Painter got a copy of; and we immediately put our estimated value to the same, amounting to 1055*l.* 11s. 2d. The fall was sudden *immediately after* upon all mine materials and operations, and they continued to depreciate in value. At length, on the 4th April, 1848, Mr. Sincock was ordered to value them, which he did; and they admit, by circular, it amounted *then* to 739*l.* 14s. 1d. They held a forced sale by auction, in face of my claim, in the Vice-Warden's Court, and after being served with notice, on the 13th June last, at which *one* individual purchased the engine and all the working apparatus for 400*l.* and odd—the whole realising only 461*l.* 8s. 1—SAMUEL CARDOZO: *Redruth, Sept.* 5.

[We insert the letter of our correspondent, as giving him an opportunity of stating his own case, without, in any way, being responsible for its contents. In another place will be found a full report of the case in the Vice-Warden's Court, to which we refer our readers. The evidence, which we have perused at length, does not, we think, differ much from Mr. Cardozo's statement; and if the above is not an *ex parte* statement, the plaintiff, we must say, has been, throughout the whole proceedings, much ill-used.]

CARWINNING HILL MINING COMPANY.

At an annual general meeting of shareholders, held at the George and Vulture Tavern, Cornhill, on Wednesday last, the 6th inst.—H. DE CASTRO, Esq., in the chair,—the accounts were examined and passed, showing—Labour cost and merchants' bills for ten months, from November, 1847, to August, 1848, to be 1475*l.* 9s. 9d.; from which deduct call of 10s. per share, 1000*l.*, leaves balance against the adventure, 475*l.* 9s. 9d.—It was unanimously resolved, that a call of 10s. per share be now made on the 2000 shares in the mine, payable on or before the 20th inst., into the bankers, Messrs. Masterman and Co., Nicholas-lane, Lombard-street.—The following report from the agent was read:—

Carwinning Hill Mine, Dairy, Sept. 5.—The lode in this mine consists of a bituminous shale lying under a strata of limestone, and upon a flinty slate, of which Carwinning Hill is composed. The lode has been extended on at the bottom of the mine for a length of 41 fms., and in that working was intersected by two cross-lodes, and which appear to form the main body of the ore. The neighbouring country is thickly interspersed with these crossings, and it is expected that, by continuing the levels, I shall fall in with more of these crossings, and, in every probability, with new bunches of ore. I have now commenced working on the ore, which has been laid open (about 100 fms.), and which, taken at the lowest calculation, is worth 10*l.* per fm. The whim dressing-floors, and all necessary conveniences for the proper working of the mine, are erected, and, consequently, our future cost will be expended on the exploring of the mine. I calculate that an additional outlay of from 500*l.* to 600*l.* will enable me to lay open about 3000 fms. of ground, which I think will sufficiently prove the mine; and, from the ore ground already discovered, I have much reason to hope for a favourable result.

CRADDOCK MOOR MINING COMPANY.

At a meeting of adventurers, held at Liskeard, on the 28th August, the accounts were presented, showing—Balance of last account, 12*l.* 16s. 6d.; call, 133*l.* 4s.=146*l.* 0s. 6d.—Labour cost for May and June, 92*l.* 11s. 9d.; materials, 44*l.* 11s. 7d.—leaving balance in favour of adventurers, 8*l.* 17s. 2d. The accounts were allowed and passed, and a call of 12s. per share made. The following report, from Capt. H. Taylor, was read to the meeting:—"Since our last meeting, our operations have been principally confined to driving a cross-cut north, which is now extended about 5 fms., in order to cut a lode that took off in the shaft 12 fms. above the present bottom, and where we had a branch of ore on it. We mentioned in our last report that we expected to cut this lode in six weeks, but the ground has made against us, so that our progress has been much slower than we expected; however, from the water coming out of the end, we expect we are very near it. We have also two men driving east. This level is extended about 7 fms.; it has been very hard, in a large course of elvan, but we have just got through it, and the lode appears to improve; it is about 1 ft. wide, composed of fluor, spar, peach, and stones of ore. There are four different lodes in West Caradon to which I beg to call your attention—viz.: Menadue, Vivian's, Dunstan's, and Gilpin's. On Menadue lode, in the 104 fm. level, there has been a good course of ore for the last 30 or 40 fms., producing from 1½ to 3 tons per fm.; the end is now distant about 100 fms. from Craddock Moor. Vivian's, in the 17, is producing full 3 tons per fm.; they have had a good lode in this end for some considerable time; it is now within 90 fms. of Craddock Moor sett, and the 38, on the same lode, producing 1 ton per fm, is but very few fms. behind the other. Dunstan's lode is large going west, and they have a good deal of ore above and between the 17 and the 38. On Gilpin's they have three ends driven west; the 17 is about 100 fms. from Craddock Moor sett; they have had a good lode nearly all the way in driving, producing now about 1 ton per fm. The 27 and 38 are not very far behind this end—a good lode in each of them."

GONAMENA MINING COMPANY.

At a meeting of adventurers, held at Liskeard, on the 24th August, the accounts were presented, showing—Labour cost for May and June, 282*l.* 2s. 8d.; materials, 194*l.* 16s. 2d.=476*l.* 18s. 5d.—Balance of last account, 27*l.* 5s. 6d.; call, 384*l.*—leaving balance against adventurers, 65*l.* 12s. 11d. The accounts were allowed and passed, and a call of 30s. per share made. The following report, from the captain, was read to the meeting:—"In the end of the 45 fm. level east the lode is 6 in. big, of flookan, mundic, and peach; it has been poor for ore the the last 4 fms. There is a bunch of ore in the level above, which this level is not yet far enough east to meet with. In the 55 fm. level end east the lode is 8 in. big, of spar, mundic, peach, and spots of ore. We had ore in the 45 farther east than the 55 is yet driven. In the 55 west the lode is 2 ft. big, of mundic, peach, and spar. The 55 cross-cut south is driven 25 fms.; we have about 22 fms. more to drive to reach the bridge lode, and 10 fms. further to the south lode. We have cut a lode 10 in. big, of spar and mundic, but have not driven on it. The engine-shaft is sunk 10 fms. under the 55; the lode is disordered by the cross course. At West Caradon, their 60 fm. cross-cut is expected shortly to intersect Gilpin's lode, which has proved productive in the upper levels, and will be in Gonamena sett a few fms. east of the expected intersection."

WELLINGTON MINING COMPANY.

At a two-monthly meeting of adventurers, held at the offices, George-yard, Lombard-street, on the 30th August, the accounts were examined and passed, showing—Labour cost for May and June, 348*l.* 0s. 9d.; merchants' bills, 169*l.* 17s. 6d.=517s. 18s. 3d.—By tin stuff, 4*l.* 14s.; copper ores sold (less lord's dues, 1-18th), 330*l.* 11s. 10d.—leaving balance against the mine of 187*l.* 6s. 5d.; to which add that of last account, 748*l.* 10s. 7d., making total balance against the adventurers of 935*l.* 17s., without bringing into account the call made in December last of 1280*l.* It was resolved, that the balance be divided *pro rata* among the shareholders, and that the purser apply to such as have not paid their proportion; and, in case of non-payment in 14 days, he be instructed to proceed against them in the Stannary Court. Capt. White's salary was increased from 8*l.* 3s. to 5*l.* 5s., and Mr. J. Gundry's from 2*l.* 2s. to 3*l.* 3s.—The following report, from Capt. Matthew White, was read:—

Wellington Mine, August 26.—In handing you a report of these mines for the meeting on Wednesday, the 30th inst., I beg to inform you, that the engine-shaft is sunk 11 fms. 4 ft. under the adit level, and will, I expect, by Tuesday, the 29th inst., be 12 fms. below this level, when we shall commence driving a cross-cut south, to cut the lode—the distance, I expect, is about 6 fms.; four of the shaftmen will be driving, while four will be sinking for bearers and cistern, for the purpose of fixing lift in the 12 fm level. The cross-cut north of the engine-shaft, in the adit level, is driven 17 fms.—ground favourable for driving; these are all our tutwork on the engine lode at present, but will increase very shortly, as the water is drained from the lode; the increase will be the sinking of a winze from the adit to the 12 fm. level, for ventilation, and Percolly whim shaft, when I hope we shall soon see some of the copper that will produce, as it did some time since, 24 per cent. In clearing up the old workings on the south lode, we have yet discovered but very little ground, and have been obliged to wait for the corn to be cut, this has been done, now we have commenced ridding a shaft from surface for the future prosecution of the work; our tribute pitches over the adit level, still continue to yield some very good copper ore. I think our next sampling will exceed the last in value, but to what extent I cannot now say, as there are four weeks to sampling; still I think I may say, that upwards of 20 tons will be as good as any we have ever had in these mines, and a parcel that will be of lower price.

WEST CARADON MINING COMPANY.

At a meeting of adventurers, held at Liskeard, on the 24th August, the accounts for May and June were presented, showing—Copper ores sold in June, 208*l.* 10s. 1d.; in July, 227*l.* 5s. 7d.; add carriage paid by the purchasers, 16*l.* 9s. 8d.; materials, 24*l.* 7s. 3d.; less lords' dues, 27*l.* 15s. 9d.=427*l.* 16s. 5d, The mine cost included—the purser's, agents, and counting-house expenses, 90*l.* 17s. 5d.; engine men, smith's work, and carpentry, 17*l.* 18s. 1d.; tribute and tutwork, 147*l.* 4s. 4d.; pitman, surface work, &c., 24*l.* 2s. 9d.; charges on ores, dressing, carriage, sampling, &c., 58*l.* 13s. 4d.; materials, 71*l.* 13s. 4d.; labour cost, 25*l.* 6s. 2d.; Devon and Cornwall Banking Company, for interest and commission, 7*l.* 17s. 7d.—amounting to 343*l.* 17*l.* 11d., and showing balance of profit, 84*l.* 18s. 6d.; add over from last account, 1412*l.* 8s. = 2259*l.* 6s. 6d.; dividend, paid 1st July, 640*l.*—leaves balance in hand, 1619*l.* 6s. 6d.—The accounts were allowed and passed, and a dividend of 50s. per share declared, payable "to the parties in whose names the shares shall then be standing in the cost-book."

WHEAL MARY CONSOLS MINING COMPANY.

At a meeting of adventurers, held at Liskeard, on the 25th August, the accounts were presented, showing—Balance of last account, 66*l.* 2s. 11d.; received for copper ore, 630*l.* 19s. 8d.; for tin, 606*l.* 7s. 1d.; materials, 37*l.* 19s. 8d.; call, 428*l.* = 1769*l.* 9s. 4d.—Labour cost for May and June, 1167*l.* 17s. 7d.; materials, 307*l.* 14s. 9d.; lords' dues, 70*l.* 6s. 9d.—leaving balance in favour of adventurers, 228*l.* 10s. 3d.—The accounts having been allowed and passed, it was resolved,—That whereas, at the last meeting, it was agreed that the expenses of working Wheal Sisters engine should be divided between Wheal Sisters and Wheal Mary Consols adventurers, in proportion to the amount in value of ores raised in each mine from the ground unwatered by said engine; and whereas there have been certain other expenses incurred in each of the above mines, and belonging to the other of them—such as the expenses of conveying through and out of Wheal Sisters Mine ores belonging to Wheal Mary, and preparing the same for sale by Wheal Sisters machinery, and also conveying through Wheal Mary ores belonging to Wheal Sisters; it is now considered desirable, and is unanimously agreed, that the whole of the costs, since the last meeting, in each mine, and also the whole of the produce of such since that time, shall be carried to a joint account, and apportioned to the adventurers in each mine, in such proportions as the value of materials and ores in hand at

each mine at the time of last meeting bore to the joint sum of materials, &c. of both mines. It is proposed to continue the workings on this principle for the above reasons, and also to lessen the expenses of management; and if any adventurers not now present feel objections thereto, they are requested to intimate the same to the purser before the meetings in October, when the question of the permanency of this arrangement is intended to be taken into consideration. The following report was then read to the meeting:—"Since the last meeting the winze has been communicated from the 25 to the 50 fm. level, on the south copper lode, by which the ventilation has been much improved. About 135 tons of ore have been raised in July and August months from the backs of the 50, which, it is calculated, will leave a profit of about 40*l.* on the workings in that part of the mine, after deducting the whole of the engine expenses. The stopes in the back of the 60 (worked through Wheal Sisters) have produced about 20 tons of copper ore in the two months. If Wheal Sisters will, by the lift in their winze, drain the lode about 10 fms. deeper, we shall be able to follow down the bunch of ore, which appears to improve in depth. Unless the pitches on the tin lode improve, we expect to sell only 10 tons of tin in the next two months. The new south tin lode is set on tribute, at 12s. in 1*l.*"

WHEAL MARY MINING COMPANY.

At a meeting of adventurers, held at the mine, the accounts for May and June were presented, showing—Mine cost for May, 307*l.* 2s. 7d.; for June, 282*l.* 6s. 2d.; merchants' bills, 268*l.* 13s. 8d.=853*l.* 2s. 5d.—Balance of last account, 60*l.* 12s. 11d.; call, 742*l.* 10s.—leaving balance due purser, 54*l.* 19s. 6d. The accounts were allowed and passed, and a call of 10s. per share made. The following report, from Capts. Paul Raby and C. Andrawartha, was read to the meeting:—"In the 80 fm. level west, on Wheal Mary lode, the lode still continues large, with spots of ore, but poor; we are driving on the branch in the cross-cut south, which is about 18 in. wide, and poor; but we have cut more water, which has gone down 3 ft. under the level in the 70 since yesterday. In the 70 fm. level east, on the middle south lode, there is a small branch of ore in the bottom of the end; west, on the same lode, there are two branches, and a horse of killas, 3 ft. between. In the 60 fm. level, on Wheal Mary lode, we have four pitches working in the back and bottom; the men are getting wages at a tribute of 10s. In the 50 fm. level, on Wheal Mary lode, the lode is poor at present, but letting go a great deal of water. A large lode has gone down in the bottom of the 40 fm. level, just before the end, composed chiefly of spar and mundic; the cross-cut in the same level south is still in good killas ground; the winze in the bottom of this level, on the middle south lode, is both poor and small; in the cross-cut north, in this level, we yesterday cut Wheal Parent lode, and have gone about 3 ft. 6 in. into the lode, but have not yet cut the north wall; the lode is good, as far as we can see, and is letting go a great quantity of water further north; it will produce about 5 tons of ore per fm. Chadwick's shaft, on Wheal Parent lode, is down in the 22 fm. level; the lode is poor at present; we are driving at the bottom of the shaft east and west; the lode east is large, but poor; west, the lode is small, but both ends are promising for ore."

WHEAL SISTERS MINING COMPANY.

At a meeting of adventurers, held at Liskeard, on the 25th August, the accounts were presented, showing—Balance of last account, 7*l.* 13s. 4d.; received for copper ore, 134*l.* 5s.; for tin, 84*l.* 1s. 6d.; call, 276*l.* = 501*l.* 19s. 10d.—Labour cost for May and June, 373*l.* 9s. 8d.; materials, 108*l.* 5s. 11d.; lord's dues, 12*l.* 12s. 7d.—leaving balance in favour of adventurers, 7*l.* 11s. 8d.—The accounts having been allowed and passed, the resolution agreed to by the Wheal Mary shareholders was adopted. The following report was read to the meeting:—"We have not yet cut the tin lode in the 40 fm. cross-cut, but expect we are now very near it. It being considered desirable to cut the heave of the copper lode in the 40, east of the cross-course, to ascertain whether it is more orey eastward, we proceeded to do so in time, we hoped, for the meeting, but have not accomplished it, although the pressure of water in the end indicates that the lode is very near. The copper in the 60 west, within Wheal Mary boundary, found making back into Wheal Sisters, as they rose for stoping, has not proved of much importance; but if Wheal Mary adventurers sink under the 60 (the lode seems best going down), they may discover ore in depth going back into Wheal Sisters. We have two pitches working on copper, each at 13s. 4d. in 1*l.* The tin lode in the 25 end, going east, is about 2 ft. wide, containing stones of tin. The lode in the 14 end now produces work of moderate quality. Both ends, though now improved, had previously been poor, and this has caused the quantity of tin raised to be less than was anticipated at last meeting. Unless this lode becomes more productive than at present (and such a change is by no means unlikely), we cannot work without some loss; and as the adventurers are not disposed, we understand, to continue any works that will not pay for themselves, we propose that Wheal Mary Consols adventurers, in order that the eastern part of their mine be not drowned by the stoppage of Wheal Sisters engine, be invited to unite their interests to ours, and carry on the two mines on joint-account—by which some saving will be effected, the intricacy of accounts avoided, and the joint-concern may, from present appearances (unless new works be undertaken), be carried on without loss."

WHEAL TREMAYNE MINING COMPANY.

At the two-monthly meeting of adventurers, held at the offices, George-yard, Lombard-street, on the 29th August, the accounts were examined and passed, showing—Labour cost for May and June, 1651*l.* 17s. 6d.; merchants' bills, 551*l.* 1s. 5d. = 2202*l.* 18s. 11d.—By sale of copper ore, 639*l.* 10s. 8d.; lead, 5*l.* 14s. 4d.; black tin, 1313*l.* 3s. 6d.; arsenic, 35*l.* (less dues, 1-20th, and carriage) = 1970*l.* 4s. 11d.; leaving balance against the mine, 232*l.* 14s.; to which add that at last account, makes a total against the mine of 869*l.* 1s. 2d., which was divided among the shareholders. It was then resolved, that on Mr. Bennett immediately paying the amounts due from him, the relinquishment of his forty-four shares will be entered into the cost-book accordingly. The following reports, from Capts. W. Blewett and J. Phillips, were read:—

Wheal Tremayne, Aug. 26.—The 50 fm. level, on the south lode, east of cross-cut south of Michell's shaft, lode 3 ft. wide, worth 8*l.* per fm. for tin. The lode in the 50 fm. level, west of the cross-cut, is 2½ ft. wide, worth 8*l.* per fm. for tin; the price for driving the level is 1*l.* 8s. per fm. This part of the mine has a very promising appearance; we consider the discovery made in the aforesaid levels, so far as we have seen, to be one of the best ever made in the mine. At Maddern's shaft, on the south lode, sinking below the 30 fm. level, the lode is 14 ft. wide, producing moderate work for tin; in the 30 fm. level, on the aforesaid lode, we have driven through upwards of 100 fms. of very kindly ground. There is a chance on this lode; it is of a good size, and the ground very favourable, and finding the lode so much improved in the 50 fm. level, it gives us every reason to believe it will prove a productive part of the mine. In the 30 fm. level, west of Field's shaft, on the south lode in this level, we have intersected the flookan. We expect Wheal Margaret will be drained in the 30 fm. level shortly; it is about 280 fms. from Wheal Margaret shaft, east to Maddern's shaft, 200 fms. of which is kindly ground—100 fms. east of Wheal Margaret for copper ore, and 100 fms. west of Maddern's for tin. We have driven through, in the 40 fm. level, west of new shaft, on the engine lode, upwards of 60 fms. of good tin ground, several fathoms of which were worth 20*l.* per fm. From the new shaft to the boundary of West Wheal Providence is about 80 fms., which has proved to be a very productive piece of ground on the engine lode and branches; the 53 fm. level will drain this piece of ground nearly 20 fms. deeper, which we expect to do shortly. There are ten tribute pitches working on it in this level, at an average of 10s. in 1*l.* In the adit level, driving west of Champion's shaft, on the north lode, the lode is 2 ft. wide, producing a moderate work for tin. We have seven pitches working in the back of this level, average tribute 10s. 6d. in 1*l.* This north lode is a large kindly lode; it will average in breadth 2½ ft., for 70 fms. in length, that is so far as we have seen it, and so far as we have seen of this lode, it is all tribute ground.

BALLESWIDDEN.—A meeting of adventurers was held at the mine on Wednesday, the 30th Aug., when the accounts for May and June were presented, showing—By sale of tin, 383*l.* 12s. 6d.; materials, &c., 32*l.* 11s. 4d.=416*l.* 3s. 9d.—Wages for the two months, 239*l.* 5s. 9d.; coals, 23*l.* 6s. 8d.; sundry carriage, 8*l.* 4s. 7d.; merchants' bills, 79*l.* 16s.; lord's and bounder's dues, 11*l.* 5s. 2d.—showing profit of 55*l.* 5s. 7d.

EAST WHEAL ROSE.—At a two-monthly meeting of shareholders, held at the mine, on the 4th inst., the accounts were examined and passed, showing—Balance of last account, 2578*l.* 7s. 11d.; ore sold, May 19, 2037*l.* 2s. 10d.; ditto 27th, 2072*l.* 16s. 5d.; ditto June 9th, 2000*l.* 6s. 2d.; ditto 16th, 819*l.* 2s. 6d.; ditto 23d, 2910*l.* 18s. 10d.; Cargol adventurers for supplies, water charge, agency, &c., 462*l.* 8s. 10d.; ditto East Wheal Rose adventurers, three-fourths of profit, 1497*l.* 17s. 1d.= 13,874*l.* 0s. 7d.—By costs for May, 2330*l.* 15s. 3d.; ditto June, 2768*l.* 7s. 11d.; merchants' bills, 1861*l.* 15s. 5d.; coals, 300*l.*; income tax, 100*l.* 12s. 3d.; lords' dues, 606*l.* 18s. 6d.; discount on ore bills, 10*l.* 11s. 10d.; dividend declared of 25*l.* per share, 3200*l.*—leaving balance in favour of the adventurers, 2694*l.* 19s. 5d.

PERRAN WHEAL VIRGIN.—At a meeting of adventurers, held at the Royal Hotel, Truro, on the 31st August, the accounts were presented, showing—Balance from last account, 208*l.* 3s. 7d.; costs, &c., for April, May, June, and July, 250*l.* 0s. 5d. = 458*l.* 4s.—By cash on account of costs and calls, 209*l.* 12s. 2d.; lead ores sold (less dues), 57*l.* 19s. 4d. = 267*l.* 11s. 6d.; balance, 190*l.* 12s. 6d. The balance was ordered to be divided; and a call of 10s. per share made, for the future working of the mine.

PENCRAIG LEAD MINE, NEAR LLANRWST.—On the 29th August, the vein was cut in the above mine, in the 15 fm. level, at the engine-shaft, and found to be 8 ft. wide, composed of beautiful sugary spar and lead, worth at least 20*l.* per fm; there is no doubt but it will make a very profitable mine.

BRIERLEY HILL.—The iron and coal trades continue gradually to improve and it is anticipated that those of the colliers and puddlers, still refusing to work at the reduction, will obtain employment at their late rate of wages.—*Ten Towns' Messenger.*

Bilston.—C. Pickering was killed in a pit belonging to Messrs. Bagnall, at Capondell, by the kibble being drawn over the pulley and throwing him out.

Rowley Regis.—G. Hall was much burnt, by an explosion of fire-damp, at the New Lion Colliery, of the New British Iron Company; he is recovering.

Tipton.—As G. Price and F. Davis were ascending one of Mr. Hopkins's pits, the rope slipped over the shroud, and the jerk threw Price out, when he fell to the bottom, and was killed on the spot.

OAK FARM IRON-WORKS.

The various circumstances connected with the suspension of these once highly-prosperous works, and which were of a very painful nature, have been noticed in the *Mining Journal* from time to time, as they occurred. On the examination of Mr. Wm. Gladstone before the Bankruptcy Commissioners at Birmingham, that gentleman made certain statements, which threw a deal of the responsibility and odium, as to the cause of failure, on the proceedings and conduct of Mr. Boydell, the managing partner. Mr. Boydell, feeling that such statements, in going forth unanswered to the world, might injure him in the opinion of many of his oldest friends and neighbours, has published a reply, with an abstract of the examination in the Bankruptcy Court, and the correspondence between the parties. The letter is addressed to Sir S. R. Glynne, Bart., in which he shows, that the extensive losses have been caused by the latter, and that by his acts he sacrificed a large prospective revenue, as well as ruined Mr. Roper and the writer. It will be impossible to go through the whole of the details in the evidence, but we will give the heads of Mr. Boydell's statement; from which it appears he had to fight his way in the management, for the general interest, amidst much opposition and considerable *mala fide*. The balance-sheet, filed by Mr. Boydell in the Court of Bankruptcy, proved that from November 2, 1845, to November 26, 1847, under his management, the Oak Farm Iron-Works realised a profit of 60,000*l.*, after paying management and banker's charges; and, in the meantime, the liabilities were reduced upwards of 130,000*l.*, besides paying to Sir S. R. Glynne, 12,000*l.* for royalty and rent. This large sum was made up out of the profits, Mr. Roper's new, and Mr. Boydell's additional capital, brought into the concern, with the amount of debts due at the time of stoppage. Mr. Boydell states, that the ruin of himself and Mr. Roper has been the result; and he considers it is only from his large property and great resources that Sir Stephen is saved from a like result. All might have been averted, had the baronet, Mr. W. E. Gladstone, and Lord Lyttleton, kept faith in accordance with the understanding come to with Messrs. Boydell and Roper; the latter complain, that they received 34,000*l.* less of floating capital than was agreed to carry on the works. Mr. Boydell states, that it even then was through Sir Stephen not giving guarantees, as promised, for the credit of the house, that the event turned out disastrous; and that since the suspension of payments, he had warned Sir Stephen of the consequences of allowing them to go through the *Gazette*. Mr. Boydell concludes by saying—"Notwithstanding I have lost all I have worked hard for in the last 25 years, I have been blessed with health of body, and strength of mind, to bear it, and shall begin business again with confidence that, if such be continued to me, I shall once more gain a competency for my family; and the experience I have acquired will be a lesson to me, and teach me not to put too much confidence in any person, however apparently *high* may be the position he *occupies*." We heartily wish Mr. Boydell may realise all he anticipates—his capability of successful management is abundantly proved throughout the entire examinations and explanations respecting the unfortunate Oak Farm Works, and our columns have often detailed inventions and improvements, emanating from him, of great mechanical skill and value, which, under more fortunate circumstances, could not have failed proving highly lucrative to the manufacturers, and of public benefit in their adoption.

DEPRECIATION IN RAILWAY PROPERTY.

The following table shows the fall in the market value of shares in the principal railways since the first week in September, 1847:—

RAILWAY.	1847.	1848.	Fall.
Eastern Counties	£18½	£13½	£5
Great Western*	105	89	16
London, Brighton, and South Coast	47½	27½	20
London and North-Western	165	111	54
London and South-Western	60	37½	22½
Midland	116½	86½	29½
Norfolk	104	59	45
South-Eastern	33½	24½	9
York, Newcastle, and Berwick	34½	28	6½
York and North Midland	78	58	20

* A call of 5*l.* per share having been paid since Sept., 1847, makes this fall equal to 21*l.*

SOUTH AUSTRALIA.—We have received Adelaide papers, with news to 7th April, from which we learn that upwards of 4500 tons of Burra Burra ore were lying on the wharf there, and only one vessel, the *Minerva*, loading with it, which would take from 50 to 100 tons; and, as hundreds of tons were coming down weekly, there was little chance of much reduction. This pile of ore is worth upwards of 100,000*l.*, the interest of which is no trifle, and it is, of much importance to get a regular supply of shipping. Shares were up to 135*l.* each

MINING IN CHILI.—The last accounts represent this republic rapidly progressing, through the wise administration of the President and his colleagues. Mining was developing itself to a great extent, and several excellent roads were in progress of being completed, which will render an easy access to the mineral districts, and afford the facilities of conveyance of the ores to the smelting establishments in the environs of Valparaiso. It is now expected, that the long-projected railway from that flourishing port to Santiago, will be carried out with energy, as the State has granted the land free of expense, and in perpetuity, to the company which has ventured upon the undertaking. Although iron exists in many parts of the republic, they find that, for the present, it will be far cheaper to import their rails and locomotives from the United States. Several extensive smelting-houses and forges were in course of construction, and, in a few years hence, a wonderful improvement will have taken place in every branch of industry—the working population being a very sober and persevering race. A treaty of commerce has been concluded between Chili and the French republic, whereby very great advantages will be derived by the mining interest, in the importation of their copper, and other metals, into France, at a mere nominal duty; a reciprocal reduction in the tariff duties on French manufactures has been accorded; friendly and commercial treaties had been also concluded with Columbia, Peru, Mexico, and the United States. The treaty with England had not yet been ratified, as the President wished to see to what extent the British Government would reduce the import duties on copper ore, and other metals, into England, as they are highly anxious to prove the strong desire the republic has to enter into the most unfettered relations with Great Britain, by a great reduction in the duties. Propositions for improvements to be made by the State were to be presented to Congress.

MINING IN MEXICO.—The news from Mexico is also more cheering as to mining adventures; tranquillity had been re-established throughout the republic, and every protection afforded to property. General Paretes, who had been attempting to disturb the present state of affairs, had only a few followers left, and his defeat was certain. The whole of the United States' troops had evacuated Vera Cruz and the coast, which will enable the Government to carry out its plans of establishing railways and other improvements. The present aspect of that large mineral portion of the globe, extending from Mexico to Peru, is highly satisfactory to mining enterprise, as confidence is daily being more and more firmly established, by the good feeling which exists throughout the republican territories of America.

THE COAL TRADE—COLLIERIES IN ASSAM.—Recent intelligence from Assam states, that energetic measures were being taken to work the coal mines there, on the banks of the Dekhoo. At a depth of 10 ft. below the surface the stratum had been found 10 ft. in thickness, of which 4 ft. was pure coal. It had not yet been ascertained how far the coal beds extended, but it was conjectured that under the stratum then worked another of richer description would be found—there were indications of such a result. One great drawback to the working of the mines was the rugged state of the country, and the difficulty of transport; impediments which, it is feared, would for a time retard the development of the resources of the country. The increasing consumption of coal in India, by the extension of steam navigation, and the introduction of steam machinery, would, it was considered, ultimately induce spirited persons to undertake the working of the mines, and surmount the difficulties at present attendant upon the undertaking. The Indian Government, it was hoped, would lend powerful assistance to any body who might take it up. The *Benares Gazette*, on the subject of these mines, and the quantity of coal to be obtained, observes, that, "though the country be rugged and difficult, still, if such an inestimable treasure is abundant, and the increasing wants of Bengal are likely to find supplies at moderate prices, the pitiful economy of temporary roads and means of conveyance ought to give way at once to a comprehensive plan for the construction of trams, which the forests of the country would immediately supply. The energy wanting in this department of the enterprise may postpone the development of the natural resources of India to an indefinite period; but, if the coal, which has been tested and found good, is in inexhaustible abundance, why is the enterprise for obtaining it delayed? The mines in the Mirzapore district are placed in a similar difficulty. They are situated in a part of the country surrounded by hills and sands. The expense of conveying the coal to depôts presents a formidable barrier to work them; but the time, we hope, is near when necessity will enable capitalists to overcome all obstacles, and reap an abundant harvest from their enterprise.'

Berzelius, the great Chemist.

The death of Berzelius, the father of analytical chemistry, has already been recorded in this paper. Berzelius was born on the 20th August, 1779, in Ostergöthland, in Sweden of a respectable family. At the age of 17, he entered the University of Upsala, where he made a rapid progress in his studies, particularly his favourite science—chemistry. After passing the necessary examinations, he received his diploma of doctor in medicine, in 1804, and was appointed medicinæ et pharmaciæ adjunctus at the Collegium Medicum at Stockholm, and gave instruction in chemistry to young students; and, on account of his small income, was obliged to practice occasionally as a physician. In 1807 he was appointed medicinæ et pharmaciæ professor, and in the same year he instituted, in conjunction with seven other eminent men, the Swedish Medical Society at Stockholm, now a most flourishing institution, and constituting the very heart of the medical profession in Sweden. In 1808 he was made a member of the Royal Academy of Science, in 1810 officiated as president, and in 1818 as perpetual secretary. On the occasion of holding this appointment for a quarter of a century, a dinner was given in the academy by the members to this distinguished *savant*, which was presided over by the present King of Sweden, then the crown prince, who, on proposing the health of Berzelius, expressed his grateful acknowledgement of his own obligations to the great chemist, for the valuable private instruction he had received from him in his younger days. In the same year he was appointed a member of the Royal Sanitary Board, of which, at the time of his death, he was the senior member. As a proof of the magnitude of his laborious pursuits, it may be sufficient to mention that he first developed the electro-chemical system, and that he has also examined and minutely described the atomic theory of the elementary bodies. He discovered and examined several great classes of chemical combinations; as, for instance, the different degrees in which sulphur combines with fluoric acid, with platinum, columbium, vanadium, tellurium, and phosphorus, the sulphates, &c. In organic chemistry, he has no less distinguished himself by his experiments; and, properly speaking, he has laid the foundation of vegetable and animal chemistry, more particularly the latter. As regards chemical analysis, the highest merits are due to him, for having arranged a new and generally adopted chemical nomenclature. In 1818, Berzelius discovered a new metal—selenium; it is very rare, being found only in some iron pyrites, and a few ores of silver, copper, and some other metals. In 1824, he discovered the metalloid, silicum, to be the base of flint, or silex, and, next to oxygen, the most abundant element in Nature. It is found in quartz, opal, chalcedony, flint, jasper, garnet, topaz, hyacinth, beryl, emerald, augite, felspar, hornblende, mica, steatite, chlorite, sparingly in vegetables, in most rocks and earths, sand, some iron ores, hot springs—as the Geysers, in Iceland, &c. In the same year, he also discovered zirconium, in hyacinth, jargon, and eudyalite; and in a very rare mineral, called thorite, he also found, in the year 1829, a new metalloid, which he named thorium. The use of the blow-pipe though partially developed, was never practically brought into operation until the subject of this memoir applied it to its present useful purposes; and his work on it has raised him a lasting monument in the annals of mineralogy. In 1835, on his wedding-day, the king sent him a patent of nobility, creating him a baron of the kingdom. His works, which have been for the most part translated into English, French, German, Italian, Spanish, and Polish, are so numerous and voluminous, that, considering the accuracy with which everything is described, it appears to be almost a wonder how one man, whose time, besides, is occupied by a great amount of official duties, has been able to accomplish such a mass of scientific publications. Berzelius had received from his majesty, King Charles John, many marks of high distinction; he was created a nobleman in 1818, a Baron in 1835, Knight Commander of the Royal Order of Wasa in 1821, and Grand Cross of the same order in 1829; he was a Knight of the Royal Swedish Order of the Polar Star, and of several foreign orders received from the Emperor of Russia, and the Kings of Prussia, Denmark, Belgium, France, and Sardinia; an honorary member of upwards of 100 literary and scientific societies. In consideration of the great and manifold services which Berzelius has bestowed on his native country, the members of the diet at Stockholm, in 1840, voted to him the annual sum of 5200 banco, as a pension for his lifetime, independent of his former emoluments.

JOINT-STOCK COMPANIES.—An Act of Parliament affecting joint stock companies, including railways, has just come into force, entitled, "An Act to amend the Acts for facilitating the winding up the affairs of joint-stock companies unable to meet their engagements, and also to facilitate the dissolution and winding up of joint-stock companies, and other partnerships." The Acts referred to by this statute (11th and 12th Victoria, cap 45) are the 7th and 8th Victoria, cap. 111; the 8th and 9th Victoria, cap. 98; and the 9th and 10th Victoria, cap. 28. The Act is to apply to the 7th and 8th Victoria, cap. 110, and to mining companies, and to certain building societies. On a creditor obtaining a judgment, or order for payment, an application can be made by petition to the Lord Chancellor in a summary manner, where no fiat in bankruptcy has issued, and the Court can order a dissolution of the company, and appoint an "official manager" to wind up the affairs, with full powers to act for the benefit of the parties—the same result to follow a declaration by a company of its insolvency. The Act contains 128 sections, with a schedule of forms, and many of the clauses have reference to the power of the Court of Chancery, and to the duties of the "official managers," whose appointments are vested in that Court. By the 123d section, district commissioners of bankruptcy and judges of the County Courts, are constituted masters-extraordinary in Chancery, and matters may be referred to them, and they are to have the same powers as Masters in Chancery, to whom petitions under this Act are to be referred, and they are to appoint, after hearing the parties, the "official managers." In all proceedings, the new law is to be termed, "The Joint-Stock Companies Winding-up Act, 1848."

BIRKENHEAD DOCKS.—We understand that the most active preparations are going on in the engineer's department of these works, in the preparation of working drawings, &c., for the recommencement of the construction of the docks forthwith. Arrangements, it is said, have been made for raising the requisite capital, and no doubt remains as to the successful accomplishment of the object of the new trust. An important trade is opening up in the exportation of coal from the Welsh mines, which can be brought, it is said, to Birkenhead docks, and put on board vessels at very considerably less cost, and with far greater facility, than from the Lancashire coal-field.—*Liverpool Times.*

THE GRIMSBY DOCKS.—These are mighty works, and are proceeding with most satisfactory rapidity, alike creditable to all concerned. The chief engineer, Mr. Rendell, is expected next week; but the engineer, Mr. Adam Smith, who is very properly called the resident engineer, is always on the works. There is a defect, or rather a sinking, in one portion of the piles from the "blow sands"—a name upon which tradition has exhausted its ingenuity, and has summed up all by ascribing to demoniac agency the "fathomless pit." Shakspeare was right in putting into *Hamlet's* soliloquising thoughts, "Oh, what a mighty piece of work is man!" and had he lived to see the mighty pieces of work which man achieves, some other as appropriate exclamation would by him have been furnished. One hundred and fifty acres taken from the sea, and defences raised to prevent the mighty ocean claiming back "its own," and such defences as will resist its foaming rage, let its battering waves lash it as they may—borrowing from some of its sister land chalk as the means of defence, of which no less a quantity than 10,000 tons are every week conveyed on a road of iron. By October, it is expected all will be ready to receive his Royal Highness Prince Albert, to lay the first stone of the intended Royal Albert Grimsby Docks; and, within three years, a dock of 37 acres will be ready to receive vessels laden with foreign stores. So much progress could not have been made but for the perseverance of Mr. Adam Smith, and those under his directions.—*Nottinghamshire Journal.*

NOBLE EXAMPLE TO EMPLOYERS.—At a dinner given to the workpeople of the Right Hon. Thomas Pemberton Leigh, at Hindley, near Wigan, the hon. gentleman, in drinking the healths of those present, concluded some very excellent remarks by the following praiseworthy declaration. The dinner was given, as is customary, previous to the departure of the hon. gentleman from the neighbourhood. He said—"There was one thing he would much like to see, and that was, men endeavouring to save something for a rainy day; and he was quite sure that, in many instances, it only required a beginning. In order to accomplish this, and to make a commencement, he would, on the Monday following, place to the credit of every one of his workmen, in the Wigan Savings' Bank, 2*l.*; and when he had done so, they would have perfect control over that sum. Further he should not interfere, as every man had a perfect right to do what he pleased with his own. They might draw it out and spend it, if they thought proper; for after he had given it to them it was their own, and he wished no further control over it. At the same time he would strongly advise them to save. He was, however, well aware how difficult a matter that was for a labouring man with a family. Still, there were often small sums, 3d., 6d., or 1s., which he might put by if he had a fund to add it to, but which, otherwise, he would go and spend at the public-house. Any such sums, however small, Mr. Ellison, his agent, would receive and pay into the bank for them; and, by way of encouragement, every addition so made in the first 12 months he would double. If any one added 5s. he would add 10s.; if any one had added 10s. he would add 1*l.*; if any one of them had added 1*l.* he would add 2*l.* Those, therefore, who had saved 20s., would have 3*l.*, with interest, to their credit at the bank, at the end of the year. He should be glad to find that they had done so. He would make no further inquiries, but at the proper time they would bring their books to his excellent agent, Mr. Ellison, who, he was sure, would carry out his wishes. It gave him great pleasure, he said, to see them all around him; and he concluded by drinking each of their good healths.

WHEAL LAWRENCE COPPER AND LEAD MINING COMPANY.—This sett is situated about seven miles south-west of Exeter, in Devonshire, adjoining Wheal Anna Maria on the west, extending nearly one mile on the course of the lodes, and half a mile from north to south. A company is just formed, dividing the mine into 1024 shares, at 3*l.* per share; and a lease has been granted by Sir L. V. Palk, Bart., for 21 years, at 1-15th dues. In the prospectus just issued, it is stated that the lodes average 5 ft. wide, of promising appearance, and that excellent stones of rich yellow sulphuret, and black oxide of copper, have been extracted at a depth of 7 feet, and are in the same sort of strata as the Great Devon Consols, and most congenial for copper. It is fully expected that 3*l.* per share will be ample for laying open the mine, and working to a profit; but should more be required, a general meeting will be called, to decide as to future operations. In a report by Messrs. T. Moyle and H. James, we find the following:—"The geological features of the sett cannot, in our opinion, be exceeded; the lodes are running through a strata of rich blue killas, perfectly congenial to mineral; and about 20 fms to the west, the elvan course crosses at an angle of 45°. The great cross-course passes through the sett and intersects all our lodes about 150 fms. to the east of our present workings. All the best mines in Devon and Cornwall have made their most productive courses of ore about the cross-courses. The cross-course through our sett produces a great quantity of black oxide of copper ore, which is a very favourable indication. We have also the granite, about half-a-mile to the south of us, dipping towards us, and in going west our lodes enter the granite about one mile from our present workings."

FOSSIL TREE.—A few days since, the workmen employed in the railway-cutting near the Coalbourn Brook, Staffordshire, discovered a fossil tree, in a perpendicular position, in the lime and ironstone formation called *chunvh*. It was 20 in. in diameter, and the top as flat as if regularly sawn off, while, in weight and hardness, it resembled ironstone. A piece, of 4 ft. in length, has been sent to Enville Hall, to enrich the Earl of Stamford's museum; the lower part still remains, but its length has not yet been ascertained.

Current Prices of Stocks, Shares, & Metals.

STOCK EXCHANGE, Saturday morning Eleven o'clock.

Bank Stock, 9 per Cent., 197 6
3 per Cent. Reduced Ann., 86¼ 6¾
3 per Cent. Consols Ann., 85¼ 6
3½ per Cent. Ann., 86¾ 7¼
Long Annuities, 8¼
India Stock, 10¼ per Cent., 240
3 per Cent. Consols for Acct, 86 ⅛
Exchequer Bills, 1000*l.* 2d. 24 22 25 pm.

Belgian, 4½ per Cent., 70
Dutch, 2½ per Cent., 44¼ ⅜
Brazilian, 5 per Cent., 76
Chilian, 6 per Cent., 86
Mexican 5 per Cent., 16¾
Russian, 5 per Cent., 99
Spanish, 5 per Cent, 12 ⅜
Ditto 3 per Cent., 23⅜

MINES.—There has been a little more business transacted in the mining share market this week than we had to report of the last. The inquiries for paying mines, as well as those that have recently improved, continue to be made; and, although business, to any particular extent, may not have resulted, we have reason to believe that many transactions will come off. We were pleased to observe a little advance on the standard last week, and which is continued this, from which we hope a progressive upward movement is about to take place.

During the week, we have had several buyers for North Pool, West Wheal Seton, South Tolgus, &c., but we are not advised of any shares actually changing hands—Camborne Consols, we are informed, have also been enquired for.

Shares in the following mines changed hands during the week—viz.: East Wheal Rose, Treviskey and Barrier, South Wheal Basset, West Caradon, Trehane, Trelawny, Tamar, Wheal Mary (Redruth), Herodsfoot, Pennant, South Trelawny, Tremayne, Antimony and Silver-Lead, Carwinning Hill, West Providence, Devon and Courtenay, Mendip Hills, &c.

The bi-monthly meeting of shareholders of the South Wheal Frances Mine was held last week, when a dividend of 5*l.* per 124th share was divided.

East Wheal Rose account meeting for May and June, was held on the 4th, when a dividend of 25*l* per 128th share was declared, reserving a balance of 2694*l.* 19s. 5d. in hand. The sales of lead during the two months realised 9340*l.* We learn that the bottom level is very much improved, and this is as much as any absent shareholder can obtain; no report of the mine is allowed to be published, nor is it furnished a proprietor, as usual in other mines, with the balance-sheet, lest publicity be given to the underground operations. Why this secresy we never could learn.

The Balleswidden adventurers held their two-monthly meeting on the 30th August, when the accounts showed a profit of 551*l.* 5s. 7d.

Meetings of the Wellington Mines, Wheal Tremayne, &c., will be found in the usual place.

We have received the reports of the bi-monthly meetings of the several mines under the pursership of Mr. E. A. Crouch, which were held at Liskeard, on the 24th, 25th, and 28th Aug., for auditing the accounts for May and June.

The West Caradon meeting was held on the 24th ult., when a dividend of 2*l.* 10s. per 256th share was declared, reserving a balance now in hand of 1619*l.* 6s. 6d.; the profits on the two months amounted to 846*l.* 18s. 6d.

The Wheal Mary meeting, held the same day, made a call of 10s. per share, to pay off the balance of 54*l.* 19s. due to the purser, and for further operations. On the 23d, in driving the north cross-cut, in the 40 fm. level, they intersected the Wheal Parent lode, which as far as they had seen (not having met the north wall), the lode was good, producing about 5 tons of ore to the fm.

Gonamena meeting was also held on the 24, the accounts showing a balance 65*l.* 12s. 11d. against the mine, to meet which a call of 30s. per share was deemed necessary. The report of the mine is not so favourable, with the exception of the hope entertained of finding Gilpin's lode, in West Caradon, being found productive in the cross-cut extending from the 60 fm. level, which had proved very good in the upper levels, and will underlie into this sett a few fms further east of the expected point of intersection.

Wheal Mary Consols meeting was held on the 25th ult.; the statement of accounts presented showed a balance of 223*l.* 10s. 3d. in favour of the adventurers. The report of the mine is rather satisfactory.

Wheal Sisters meeting was also held on the 25th, and the accounts showed a balance of 7*l.* 11s. 8d. in favour of the mine. The report recommends that Wheal Mary Consols be worked conjointly with Wheal Sisters, the setts being adjoining, and the engine of the latter mine draining both.

Craddock Moor adventurers met on the 28th; the accounts presented a balance of 8*l.* 17s. 2d. in favour of the mine; a call of 12s. per share was made. The report of the mine draws particular attention to the productiveness of the West Caradon lodes, which run through this sett; and although that portion of the lodes on which they are now working in Craddock Moor are not remunerative, they have much encouragement to look forward and—hope. It, therefore, becomes a matter of time and capital, as well as speculation.

Carwinning Hill meeting was held on the 6th, when a call of 10s. was made. Since the meeting, 6 tons of copper ore had been shipped to Liverpool.

The foreign share market has been tolerably active this week. Australians and United Mexicans have receded, and been done at lower figures. Bolanos, Copiapos, Imperial Brazilians, and Altens have also changed hands.

Dispatches were received on the 2nd, per H. M. packet, *Petrel*, by the Imperial Brazilian, National Brazilian, and the St. John del Rey Mining Companies. By the former, we learn the safe arrival from Rio of the troop, sent down for the purpose, with all the heavy pumps, &c. At Bananal every preparation had been made, by clearing up the adits and old shafts, to commence driving on the gold veins. Walker's shaft is in course of sinking favourably, and the cross-cuts north and south in the deep adit level produce samples of gold. The letters, dated the 23rd June, state that, on the 21st, they had commenced clearing the rubbish from the big pump vein, and were in hourly expectation of seeing the end, where the former company is represented to have left gold in sight—the next advices are looked for with much anxiety. The National Brazilian Company are advised to the 22nd of June; a few days prior to which some important discoveries had been made in enlarging a new plat for filling. The produce from Cocaes, from the 4th to 24th June, amounts to mks. 11 4 10 18, and from Cuiaba, for 10 days, mks. 4 5 5 12.

The St. John del Rey Company are advised to the 17th June; and the gold extracted to that date was 4134 oitavas, from 243·41 cubic feet of sand. The returns for the first nine days had unaccountably diminished; nor had the supply of stone been abundant, for the reasons assigned in the detailed report.

Letters have been received by the Copiapo Mining Company; the report for the month of May is, upon the whole, very encouraging, especially the prospects at the Esperanza Mine, where they have a very promising lode of rich copper ore at a shallow depth; this mine is entirely new. San Pedro is also looking very well; the returns for the month of May is 76 tons.

Since writing the foregoing, other dispatches were received, yesterday, by the Brazilian Mining Companies. The St. John del Rey report advices of no improvement, but gives the returns down to the 8th July; and showing the accounts, for the month of June, whereby a profit of 1275*l.* had been made. The National Brazilian letters are to the 4th July, confirming the improvement advised in former account. The Imperial Brazilian accounts are to the 3d of July, and are confirmatory of the foregoing. The produce for the last half-year to the 30th of June:—Gongo Soco, 86 lbs. 4 ozs. 7 dwts.; Bananal, 3 lbs. 1 oz. 13 dwts.=89 lbs. 6 ozs.

The following arrivals of specie have taken place since our last:—The Royal Mail Steam-Packet Company's ship, *Tay*, arrived at Southampton, on Saturday, the 2d inst., bringing on freight the following specie:—Silver coin value $60 144; gold coin, value $69,632; bar and melted gold, value $61,458; gold-dust, $83,378; bar and melted silver, value $293,178; British and French coin, $12,376; also platina, value $2000; precious stones, valued at $5600: platu pina of $102,429 value; the total value of specie about 140,000*l.* The *Rob Roy* arrived on Saturday, from St. Petersburgh, having 170,000*l.* in gold bar, on account of the Russian Government. The Ocean Steam Navigation Company's ship, *Herrmann*, arrived, on Monday, at Southampton, from America, having on freight, $1000 for Southampton, $15,000 for Bremen, and $17,200 for Havre. The Peninsular and Oriental Steam Navigation Company's ship, *Euxine*, arrived at Southampton, on Tuesday, from Constantinople, having on freight 48 packages of gold coin, of the value of 178,000*l.* sterling.

HULL, THURSDAY.—Most of the railway meetings of the half-year are now over, and we think, as previously stated, they have not been of a more unsatisfactory character than might have been expected from the nature of the times. The market remains inanimate, with (at our present writing) a tendency to decline, notwithstanding the fine weather, which is rather singular. North British stock, the meeting of which, on the 13th inst., is looked forward to with some degree of anxiety, is comparatively firm.

CURRENT PRICE OF GOLD AND SILVER.

Foreign gold, in bars .... per oz.	£3	17	9	New dollars ..... per oz.	£0 4 10½
" Portugal pieces	0	0	0	Silver in bars (standard)	0 4 11¼

LOSSES FROM THE FLOODING OF A COLLIERY.—A petition has just been filed under the Debtor and Creditor Arrangement Act, to obtain the protection of the Court of Bankruptcy, by J. Fitzgerald, Esq., of Portland-place, Regent's-park, the Oak Lodge, Leamington, Brighton, and other places. The debts of the petitioner exceed the enormous sum of 138,000*l.*, and his application to Mr. Commissioner Fane is attributed to water having got into his mines at Pendleton, in Lancashire, which involved him in very serious losses. His proposition to creditors, in liquidation of his debts, is to pay 6000*l.* per year, secured upon the assignment of the Pendleton Mines, the machinery, working utensils, &c., until the whole of his debts are satisfied, and in case of his death, then his widow, Mrs. Mary Francis Fitzgerald is to continue an annual payment of 4000*l.* Several of the creditors' debts average above 10,000*l.*; but, upon the first meeting under the petition, a sufficient majority of the creditors acceded to the proposition, and the learned commissioner awarded Mr. Fitzgerald protection from arrest. The petition has been filed under what is commonly known as Lord Brougham's Debtor and Creditor Arrangement Act, and before an applicant to the Court of Bankruptcy can obtain protection, he must get three-fifths of the creditors present at the first meeting, and nine-tenths of his creditors at the second meeting, before he obtains his final protection.

PRICES OF MINING SHARES.

BRITISH MINES.

Shares.	Company.	Paid.	Price.
1000	Abergwesain	7	—
512	Albert Consols	1	2¼
1024	Alfred Consols	4¼	5
235	Andrew and Nangilsa	23½	5
1000	Antimony and Silver-Lead Mining & Smelting	5	6¼
1024	AshburtonUnited Mines	8¼	10
1624	Balleswidden	9	18
128	Balnoon Consols	25	25
10000	Banwen Iron Co.	6	6¼
1000	Barristown	4¼	1
4000	Bedford	2½	2
1244	Birch Tor Tin Mine	9¼	1¼
8000	Blaenavon	50	17½
100	Botallack	175	00
120	Brewer	5	7
10000	British Iron, New, regis.	10	13
—	Ditto ditto, scrip	10	10
128	Budnick Consols	52½	35
128	Callestock	17	10
1000	Callington	19	20
1000	Camborne Consols	5	12
20000	Cameron's Steam Coal	6	1
256	Caradon Copper Mine	9¼	2
256	Caradon Mines	22½	10
256	Caradon United	24	5
256	Caradon Wh. Hooper	21	10
1000	Carn Brea	15	95
3000	Carthew Consols	1¼	5
2048	Cascade	1	2
112	Charlestown	220	60
512	Coatlithe Hill	¼	1
500	Comblawn	5¼	6
128	Comfort	45	37
256	Condurrow	20	26
2560	Cook's Kitchen	14	2
1000	Coombe Valley Quarry	3	4
6300	Cornish Mining Co.	2	2⅜-½
20000	Cornwall New Mining	1	1
1000	Copper Bottom	1¼	6¼
1024	Cosheen	4¼	20
225	Craddock Moor	16½	5
128	Creeg Braws	120	100
500	Cubert Mine	12½	10
1000	Cwm Erfin	3½	1¼
300	D.Prior & Buckfastleigh	14	26
7100	Derwent	8½	5
845	Devon&CourtenayCon.	7¾	¾
1024	Devon Great Consols	1	205
1000	Dinurode	2	5
186	Dolcoath	30	15
2560	Drake Walls	4	4
10000	Durham County Coal	45	9
3000	Dyfngwm	10	12¼
512	East Alvenney	5½	12¼
112	East Caradon	47	47
2048	East Crowndale	5½	2¼
512	East Combe Silver-Lead	6¼	6¼
128	East Pool	5	10
100	East Relistian	22	40
9000	East Tamar Consols	¼	¼
—	East Wheal Albert	1	3
94	East Wheal Crofty	125	280
1024	East Wheal Fortune	2	3
1024	East Wheal Friendship	3	3¼
128	East Wheal Rose	50	800
—	East of Scotland Iron Co.	2¼	1¼
123	East Wheal Seton	14	10
256	Exmoor Wh. Eliza	4	6
512	Fowey Consols	40	45
1024	Freidd Llwydd Mines	1¼	3¼
6400	Gadair	2	2
20000	Galvanised Iron Co.	10	1¼
4000	Gen. Mining Co. for Irel.	1¼	1¼
2048	Goldscope Mine	2	2
256	Gonamena	34	8
128	Goonvrea	4	2
100	Great Consols	1000	400
2560	Great Michell Consols	1¼	¼
256	Great Resugga Moor	11	6
512	Gt. Wh. Rough Tor Con.	17½	20
100	Grogwinion	5	—
1200	Grows Slate Company	5	5
256	Gwinear Consols	7	3
5000	Helguston Down, Con.	¾	2¼
256	Herodsfoot	18	25
10000	Hibernian	124	1⅞
239	Hobb's Hill	6	1¼
1000	Holmbush	19	1⅞
827	Kirkcudbrightshire	8¾	2
2048	Lamlercoe Wh. Maria	11	1
128	Lelant Consols	90	60
160	Levant	—	120
1000	Lewis	15	5½
1000	Llwyn Malees	5	—
3600	Llynvi Iron	50	50
256	Lostwithiel Consols	15	15
6000	Marke Valley	10	2
5000	Mendip Hills	2½	¾
5000	Merionethshire Slate & Slate Slab Co.	1¼	2
128	Metha	34	133
20000	Mining Co. of Ireland	7	4
256	New East Crowndale	2¾	2¼
128	North Fowey Consols	37	10
100	North Pool	45	350
140	North Roskear	5¼	155
256	North Wh. Abraham	1	1
262	North Wh. Leisure	1¼	2
10000	Northern Coal Co.	23	2
128	Par Consols	—	1000
4000	Pennant	1¼	1
100	Penrilw	30	65
1024	Penzance Consols	16s 3d	1
1280	Perran St. George Un.	13	20
128	Perran Wh. Virgin	9¼	10
512	Plymouth Wh. Yeoland	6¼	15
256	Polsaith Consols	4¼	4¼
10000	Rhymney Iron	50	18
10000	Ditto New	7	6¼
1000	Rosewall Hill	1	5
256	Rosewarva Mines	—	12
3072	South Callington Mine	2	¼

BRITISH MINES—*continued.*

Shares.	Company.	Paid.	Price.
128	South Caradon	10	350
1100	South Dolcoath	4	4
256	Sth. Friendsh. Wh. Ann	20	4
200	South Harvannah	10	25
256	South Molton	5	8
256	South Tolgus	10	55
256	South Trelawny	20	12
128	South Wheal Basset	110	120
256	South Wh. Betsey	2¼	12¼
124	South Wh. Frances	160	200
1000	South Wh. Maria	2¼	1¼
10000	Southern & Western, Irish	2	4
280	Spearne Moor	30	40
256	St. Austell Consols	9	—
94	St. Ives Consols	—	320
128	St. Michael Penkivel	5	10½
999	St. Minver Consols	1	6
1000	Stray Park	43	15
9600	Tamar Consols	3	5½
1024	Tavy Consols	4	8
6000	Tincroft	7	5
1000	Tin Vale	2¾	3¼
128	Tokenbury	152¼	10
256	Tollpetherwin	3¼	5
256	Tregordan	1	7
256	Trehane	2¾	26
5000	Treleigh Consols	6	1¼
2000	Trenance	3	18
96	Tresaveau	10	210
120	Trethellan	5	15
120	Treviskey and Barrier	130	85
288	Treveau	1¼	5
100	United Mines	300	350
256	Wellington Mines	15	10
128	West Basset	45	7
256	West Caradon	20	100
128	West Cargoll	2	12
512	West Fowey Consols	40	15
256	West Providence	9	12
200	West Seton	40	180
—	West of Scotland Iron Co.	210	210
120	West Trethellan	5	30
256	West United Hills	—	4¼
512	West Wheal Frances	1¾	2
256	West Wh. Friendship	2	8
3725	West Wheal Jewel	11	1¼
2560	West Wh. Maria	3	¼
256	West Wheal Tolgus	21¼	3¼
256	West Wheal Treasury	19	8
5200	Wicklow Copper	5	8¾
184	Wheal Adams	51	10
1000	Wheal Agar	—	8
256	Wheal Albert	10	1
256	Wheal Allen	2	5
240	Wheal Anderton	23	18
128	Wheal Ann	—	50¼
512	Wheal Anna Maria	6¼	8
1024	Wheal Ash	4¼	8
120	Wheal Bal	5¼	20
2560	Wheal Barbara	1¼	4-5
256	Wheal Benny	12¼	7
256	Wheal Blencowe	21	5
256	Wheal Bucketts	20	5
256	Wheal Calstock	5	10
136	Wheal Clifford	190	50
1024	Wheal Coad	¼	—
268	Wheal Courtenay	12½	15
256	Wheal Fortescue	6¼	5
388	Wheal Franco	27	18
128	Wheal Harriet	45	50
256	Wheal Jane	21	15
1024	Wheal Lawrence	2¾	6
256	Wheal Louisa	8¼	8
112	Wheal Margaret	79	250
512	Wheal Mary Ann	5	12¼
237	Wheal Mary Consols	42¼	5
—	Wheal Penhale	—	12
210	Wheal Prospect	4	7
120	Wheal Reeth	41	150
128	Wheal Rose	60	5
99	Wheal Seton	214	700
194	Wheal Sisters	32½	12
512	Wheal Sophia	3¼	5
128	Wheal Spearne	10	75
128	Wheal St. Ann	30	35
550	Wheal Trescoll	2	10
260	Wheal Tretawny	7¼	55
256	Wh. Tremaine (St. Ervan)	7¼	4
1024	Wheal Tremayne	35	1¼
92	Wheal Tryphena	140	265
242	Wheal Venland	29¾	30
256	Wheal Vlow (Perranz.)	¾	¾
184	Wheal Vyvyan	—	60
250	Wheal Williams	28¾	8
1024	Whiddon Mines	4¾	4¼

FOREIGN MINES.

Shares.	Company.	Paid.	Price.
5000	Alten Mining Company	14¼	2¼
15000	Asturian Mining Co.	13	2¼
20000	Australian	2¼	3¾
10000	Anglo-Mexican Co.	100	¼
12374	Ditto Subscription	25	2¼
6000	Barossa Range	¼	1
3000	Bolanos	150	2½
2000	Ditto Scrip	15	3
12000	Brazilian Imperial	23	4
10000	Cobre Copper Co.	40	13¾
10000	Copiapo Mining Co.	14	2
10000	General Mining Ass'n.	20	11
5000	Kinzigthal Mining Ass.	2	3
20051	Mexican Company	59	—
2000	Mexican & SouthAmer.	8	¼
5000	Mocaubas & Cocaes	30	3½
100000	N. Brit. Australasian	1	¼
29320	{El.del Monte, regis. / Ditto unregistered}	28	¼
	Ditto Red Debentures	—	4
	Ditto Black ditto	—	3
	Ditto Loan Notes	150	26
7000	Royal Santiago	10	5
61000	St. John del Rey	15	7¼
43174	United Mexican	Av. 28¼	3

*** *We should feel greatly obliged by agents, or others interested, furnishing us with such corrections for our Share List as we may not have received through our usual channels of information—our object being, to present as accurate a list of prices as can be obtained—to procure which, we solicit the aid of correspondents in general.*

RAILWAY TRAFFIC RETURNS.

Name of Railway.	Lgth. Rway.	Present actual cost.	Price per share	Last Div.	Traffic Returns. 1848	1847
Belfast and Ballymena	—	—	—	—	£771	—
Birkenhead, Lancashire, & Chesh.	15	997,284	37	5*p. c.**	943	870
Caledonian	141	3,594,470	20½	—	5037	—
Chester and Holyhead	84	3,993,732	19¾	4	—	—
Dublin and Drogheda	35½	754,529	22¾	—	833	937
Dublin and Kingstown	7¾	395,915	—	6	1296	1318
Dundee, Perth, & Aberdeen Junc.	47½	415,073	25¾	8	1404	1174
East Anglian (Lynn to Ely)	55½	1,167,104	4¾	—	579	—
East Lancashire	31	1,733,915	16¾	5	1736	1084
Eastern Counties and Norfolk	295	9,833,859	13¾	4	15300	14430
Eastern Union	51¾	979,926	20	7¾	1420	1108
Edinburgh and Glasgow	57½	2,481,767	41	—	4194	4629
Edinburgh and Northern	48½	1,392,092	15¾	4*	2246	—
Glasgow, Paisley, and Ayr	70	2,097,321	60¾	6	2805	2814
Glasgow, Paisley, & Greenock	22½	845,545	14¾	4	1247	1576
Gt. Southern & Western, Ireland	131	1,809,787	22¾	4*	3041	1634
Great Western	286¾	10,970,636	89	7	21566	20907
Kendal and Windermere	10½	169,888	23	—	239	258
Lancaster and Carlisle	70	1,395,193	46¾	4	2602	1838
Lancashire and Yorkshire	154½	7,597,618	86	7	12650	11711
London and North Western	435	21,513,354	114	8	46312	47927
London and Blackwall	4	1,241,061	4¾	1¾	1294	1343
London, Brighton, & South Coast	162½	6,087,822	27¾	4	10958	11284
London and South-Western	210	7,139,733	37¾	8	13178	10624
Londonderry and Enniskillen	14½	145,135	16	5	141	107
Manchester, Sheffield, & Lincolnsh.	62½	2,336,624	57½	5	3226	3044
Maryport and Carlisle	28	440,851	40	—	659	629
Midland Company	423½	13,254,006	86¾	7	24884	23524
Midland Great Western (Irish)	36½	725,332	10¾	4*	—	1608
North British	82	2,800,748	20	5	3004	2904
Scottish Central	43	1,144,810	23	—	1459	—
Shrewsbury and Chester	23	780,279	14	—	889	568
South Devon	50½	1,609,071	13	5	1739	1269
South-Eastern	165¾	6,932,181	24¾	6¾	10387	12039
Taff Vale	38	820,056	125	5¾	1850	1709
Ulster	36	684,684	45¾	4¾	741	771
Whitehaven Junction	12	147,095	7	4¾	193	223
York, Newcastle, & Berwick	269	4,466,526	28	9	13645	13013
York and North Midland	234	3,799,297	58	10	9402	9287

* Interest.—Total for last week, £219,625, being an increase of £13,388 over last year.

SHARES IN THE NEW RIVER COMPANY.—Messrs. Farebrother & Co. recently sold, by auction, two quarters of a 36th share, to the Rev. R. Bourne, for 8280*l.*

LATEST CURRENT PRICES OF METALS.

LONDON, SEPTEMBER 8, 1848.

	£ s.	£ s. d.		£ s.	£ s. d.
IRON—Bar s. Wales...*ton*	0 0—	5 15 0	COPPER—Ord. bottoms ..	0 0—	0 0 10
" ..London ..	6 12	6 6 15 0	YELLOW METAL SHEATHING	0 0—	0 0 7½
Nail rods "	7 12	6 7 15 0	TIN—Com. blocks *g...cwt.*	0 0—	3 13 0
Hoop (Staf.) "	8 5—	8 10 0	" bars	0 0—	3 14 0
Sheet "	9 5—	9 10 0	Refined	0 0—	3 18 0
Bars " "	7 10—	8 0 0	Straits A ... *ton* on the	0 0—	3 14 0
Welsh cold-blast foundry pig ...	3 10—	4 0 0	Banca .... spot.	0 0—	4 0 0
Scotch pig *b*, Clyde	2 5—	2 6 0	ditto for arrival....	0 0—	3 13 0
Rails, average	0 0—	6 0 0	TIN-PLATES—Ch., IC *l*, box	1 8—	1 10 0
Chairs	0 0—	4 0 0	" IX ...	1 14—	1 16 0
Russian, CCND *c* ..	0 0—	17 0 0	Coke, IC	1 5	6 1 6 0
" PSF	0 0—	——	" IX	1 11	6 1 12 0
" Gourieff	0 0—	——	LEAD—Sheet *s* .....*ton*	0 0—	17 0 0
" Archangel	9 0—	13 0 0	Pig, refined	0 0—	18 0 0
Swedish *d*, on the spot	10 15—	11 0 0	" common	16 0—	16 10 0
" Steel, fagt.	0 0—	15 0 0	" Spanish, in bd.	0 0—	16 0 0
" " *kegse*	0 0—	13 10 0	Red	0 0—	18 10 0
COPPER—Tile *f*	0 0—	78 10 0	Dry White.....	0 0—	23 0 0
Tough cake	0 0—	79 10 0	Shot (Patent).....	0 0—	19 10 0
Best selected	0 0—	82 10 0	SPELTER—(Cake) *l* on spot	0 0—	14 10 0
Ordin. sheets, *lb*...	0 0—	0 0 9	ZINC—(Sheet) *m* export.	20 0—	21 0 0
			QUICKSILVER4 .....*lb.*	0 0—	0 3 6

a Discount 2½ per cent. *b* Net cash. *c* Discount 2½ per cent. *d* Ditto *e* In kegs ¼ and ⅛-inch. *f* Discount 3 per cent. *g* Ditto 2½ per cent. *h* Net cash. in bond. *i* Discount 3 per cent. *k* Ditto 2½ per cent. *l* Net cash: *m* Discount 1½ per cent. *n* Discount 1¼ per cent.

REMARKS.—Iron continues dull of sale, but prices are maintained. Copper and yellow metal are in good demand.—English tin was reduced yesterday 2s. per cwt. on common and 1s. per cwt. on refined; Banca and Straits tin, on the spot, remain as quoted in last week's *Mining Journal*, but the former is offered by buyers at the late sale at Rotterdam, for prompt delivery in London, at 72s. to 73s. per cwt., and at these rates sales have been made this week.—Lead is a shade firmer, and large sales have been made within the last 2 or three days by the principal northern smelters. Spelter is still dull, and no recent sales of the least importance have been made. On other metals no remarks to make.

GLASGOW PIG-IRON TRADE, SEPT. 7.—The agreement of the Germans and the Danes to an armistice, which, it is calculated, will result in a speedy adjustment of their differences—the improvement that has taken place in the weather, and the appearance of harvest—have bettered the prospects of trade generally; and there has sprung up in the pig-iron trade an improved feeling. There has been more business done this week than for some time past, and an advance on the price of last week has been obtained.—We quote mixed Nos. at 45s. 6d. to 46s.—cash, free on board here.

LEAD ORES.

Sold at the Mine.

Mines.	*Tons.*	*Price.*	*Purchasers.*
East Wheal Rose	81	£11 3 0	Walker, Parker, & Co.
ditto	78	11 9 0	Newton, Keater, & Co.
ditto	50	10 17 6	ditto.
Total tons	209.		

Sold in London.

Cwm Erfin	20	£12 11 6	Newton, Keates, & Co.
Wheal Adams	33	9 13 6	Tamar Company.
Total tons	53.		

Sold at Bagilli.

Foxdale	96	£9 11 6	Newton, Keates, & Co.
Cwmley	47	8 11 0	ditto.
Machynlleth	38	9 7 6	Walker, Parker, & Co.
Total tons	181.		

BLACK TIN.

Mines.	*Tons.*	*Amount.*	*Purchasers.*
Wheal Friendship	3	£38 7 6	Williams and Co.
ditto	⅞	31 0 0	ditto

COPPER ORES.

Sampled August 3, and Sold at Andrew's Hotel, Redruth, Sept. 7, 1848.

Mines.	*Tons.*	*Price*	*Mines.*	*Tons.*	*Price*
Carn Brea	102	£4 13 6	Levant	58	£4 5 0
ditto	87	6 7 0	ditto	53	7 17 0
ditto	86	8 19 0	ditto	50	2 0 6
ditto	77	7 14 6	West Wh. Treasury	58	5 5 0
ditto	73	8 18 0	ditto	52	3 17 0
ditto	69	4 13 0	ditto	41	4 0 6
ditto	68	4 13 6	Alfred Consols	76	2 8 6
ditto	65	5 1 6	ditto	28	1 5 6
ditto	48	4 11 0	Wh. Tremayne	41	2 18 6
ditto	47	3 9 0	ditto	7	2 15 0
ditto	35	1 0 6	Wh. Agar	46	3 13 6
Par Consols	107	6 0 6	Wh. Friendship	42	3 8 6
ditto	97	5 14 6	Botallack	40	4 3 0
ditto	92	4 17 6	Richards's Ore	28	1 5 0
ditto	64	8 18 0	Polgooth	20	3 1 0
Levant	82	6 12 6	Wh. Virgin	14	3 5 0
ditto	65	3 5 6	Copper Bottom	5	6 4 6

TOTAL PRODUCE.

Carn Brea	757	£4428	11 6	Wh. Friendship	42 £143 17 0
Par Consols	360	2218	2 0	Botallack	40 166 0 0
Levant	308	1519	18 6	Richards's Ore	28 35 0 0
West Wh. Treasury	151	669	14 6	Polgooth	20 61 0 0
Alfred Consols	104	220	0 0	Wh. Virgin	14 45 10 0
Wh. Tremayne	48	139	3 6	Copper Bottom	5 31 2 6
Wh. Agar	46	169	1 0		

Average Standard	£ 85 7 0	Average Produce	9¼
Average Price per ton	£5 2 6		
Quantity of Ore	1923 tons.	Quantity of Fine Copper,	177 tons 5 cwts.
Amount of Money	£9847 0 6		
LAST SALE.—Average Standard	£ 91 2 0.	—Average Produce	7¼

COMPANIES BY WHOM THE ORES WERE PURCHASED.

	Tons.	Amount.
Mines Royal	179	£1122 18 3
Vivian and Sons	452	2344 0 6
Freeman and Co.	361	2250 17 0
P. Grenfell and Sons	292	872 5 6
Crown Copper Company	32	284 16 0
Sims, Willyams, and Co.	132	347 15 0
Williams, Foster, and Co.	347½	2078 18 6
Schneider and Co.	127½	545 9 9
Total tons	1923	£9647 0 6

NO SALE on Thursday next, September 14.

Copper ores for sale on Thursday week, at the Royal Hotel, Truro.

NOTICES TO CORRESPONDENTS.

*** We should feel obliged to all pursers, captains, or adventurers, to forward particulars of meetings, &c., of the mines with which they may be connected, on the earliest opportunity, that they may be published in the Journal with as little delay as possible.

COPPER SHEATHING—*Errata.*—Several inaccuracies occurred in Mr. Prideaux's communication on this subject, in last journal. In the notice of "Smelter and Refiner"—"coarse metal," should be "coarse *copper*." In the request to "Germanicus," it should be, after "some of the copper"—"A proved sheet, stripped off after 20 years' wear, the more in tropical climates the better, is the thing wanted: and a new sheet." &c. In the first line of the last paragraph, "melting the calcined ore," should be "*un*calcined;" and the letter should be signed "J. Prideaux."

MINING IN NORTH WALES—*Erratum.*—I perceive an error in my letter of last week, respecting the quantity of ground explored in the lode, in the Cowarch Mine; it *should* be 1300 fms., and *not* 130, as stated in the Journal.—A MINER: *Merioneth, Sept. 5.*

We must impress upon our correspondents, the necessity of invariably furnishing us with their names and addresses; not that their communications should, consequently, be noticed, but as an earnest to us of their good faith.

Now ready, price 2s.,

A Glossary of Mining and Smelting Terms,

USED IN ENGLISH AND FOREIGN MINING DISTRICTS.

Published at the office of the *Mining Journal*, 26, Fleet-street, London; and may be had of John Weale, 59, High Holborn, and of all booksellers and newsmen.

THE MINING JOURNAL

Railway and Commercial Gazette.

LONDON, SEPTEMBER 9, 1848.

The MINING JOURNAL is published at about Eleven o'clock on Saturday morning, at the office, 26, Fleet-street, and can be obtained, before Twelve, of all news agents, at the Royal Exchange, and other parts of London.

Notwithstanding the determined opposition to which the bill for the reduction of the duties on foreign copper ore has been subjected, in its passage through the two Houses of the Legislature, it has, on the very last day of the recent Parliamentary session, become the law of the land. Among the various individuals forming the opposition to the measure, a very different animus has existed; a proportion of them, doubtless, pursued such course under the conviction that, by giving the proposed facilities for the introduction of foreign copper ore, it would tend to throw out of employment the thousands of our Cornish fellow-countrymen, who obtain a subsistence by their labour in the deep mines of that county; another portion have adhered to their opposition, without feeling any particular interest in the tendency of the measure, merely to aid in the embarrassment of Ministers; and a third portion may have been influenced by personal motives, arising from the possession of mineral lands. Whatever may have been the motives of the opposition, as a body, one thing is certain, that the entire burden of their remarks was, the conviction that the measure would irretrievably ruin our own mines, and give a bonus to the foreign miner to inundate England with slave-raised copper ore. If there is one party in this kingdom more interested in this important question than another, we should naturally think it would be the landed proprietors and capitalist adventurers of Cornwall itself, and the adjacent county, Devon. The majority of the Members of Parliament for these counties are more or less engaged, or interested, in mining pursuits, and many of them are proprietors of mineral lands. If, then, this measure, for the admission of foreign ores, is fraught with such imminent danger to the best interests of their constituents—if, as has been alleged, it would shut up the mines, and convert this once industrious, wealthy, and happy corner of our island, into a sterile desert—if it would rob the landowner, ruin the capitalist, pauperise the mine labourer, and be only productive of wide-spread havoc and destruction—where were these said representatives of the Cornish people at the third reading of the bill in the House of Commons? Sir CHARLES LEMON, in particular, who has been for years so prominent in his opposition to any reduction in the duties, why was he not at his post? Our readers, who are not aware of the fact, will be surprised to learn that, with the exception of the hon. Member for Bodmin (Mr. JAMES WYLD), who, with much credit to himself, consistently pursued the course he had adopted to the last, not a Member for Cornwall voted in the minority! If they conscientiously believed the measure fraught with the evils we have above enumerated, it was at least their duty to be in their places, and record their votes, even if they considered their opposition hopeless. But how stands the fact?—Out of 14 Members returned by Cornwall, and 18 by Devonshire, the only votes were, in favour of the measure, Viscount EBRINGTON, M.P. for Plymouth; J. LOCKE, M.P. for Honiton; and Col. MATHESON, M.P. for Ashburton; and against (*solus*, and totally unsupported), JAMES WYLD, M.P. for Bodmin.

The following 28 Members did not vote:—

Bodmin—H. C. Lacy.
East Cornwall—W. H. Pole Carew; T. I. Agar Robartes.
West Cornwall—E. W. W. Pendarves; Sir Charles Lemon.
Dartmouth—G. Moffatt.
Devonport—H. Tufnell; J. Romilly.
North Devon—Sir T. D. Acland, Bart.; L. W. Buck.
South Devon—Sir J. B. Y. Buller, Bart.; Lord Courtenay.
Helston—Sir R. R. Vyvyan, Bart.
Honiton—Sir J. W. Hogg.
Launceston—Rear Admiral W. Bowles.
Liskeard—C. Buller, jun.
Penryn and Falmouth—H. Gwyn; F. Mowatt.
Plymouth—R. Palmer.
St. Ives—Lord W. Paulet.
Tavistock—W. Russell; J. S. Trelawny.
Tiverton—J. Heathcote; Viscount Palmerston.
Totness—Lord Seymour; T. B. Baldwin.
Truro—E. Turner; J. E. Vivian.

If the measure was of that serious importance, which we are told it was, and its defeat of such vital moment to the mining interests of Cornwall and Devon, had the above 28 Members been in their places, and acted upon such opinion, the measure would have been defeated, and the so-called salvation of the mines secured. If the local interests of a county are not to be looked to by its several representatives, whose duty is it? We do not believe that such is the opinion, except, indeed, of a very small minority; much less do we fear the evil consequences to our mining interest, which the opponents of the reduction so gloomily foresee. It has ever been found, that shackles upon any and every branch of commerce, under the title of "protection," have been an incubus on, and a bar to, the success of such trade; and in every case of removal, such trade has acquired an elasticity and an extension, in proportion to the burden so removed. We can see no reason why, in the case of copper, like causes should not produce similar effects; and we have no doubt, that the passing of the Act in question, will give a stimulus to the copper trade, which will greatly revive the prosperity of the Cornish miner, secure to England the smelting trade, and the copper markets of Europe and Asia, which, whatever may be said to the contrary, were gradually, but surely, transplanting themselves to other shores; cause an unceasing demand for our manufactures, for shipment to distant lands; and prove of paramount importance to our shipping interest. There is one point, however, on which we cannot agree with the policy of the Government—placing the foreigner in a position, as to the importation of copper ore, far more advantageous than our colonists. We must contend, that if foreign ore is to be admitted at 1s. per ton, that from our own colonies ought to enter free; a greater difference than this should have been made, at least to balance the increased cost of freight from those far distant countries, Australia, New Zealand, &c.—as compared with Cuba and South America.

The measure is now, however, law; and we sincerely trust, that in watching its effects as time rolls on, we shall find the results tending to the interests and prosperity of the whole community.

The following are the divisions on the third readings in both Houses.

HOUSE OF COMMONS.

AYES.

Bernal, Ralph	Hume, Joseph
Blackall, Samuel Wensley (Ireland)	Jervis, Sir John
Boyle, Hon. Colonel	Lascelles, Hon. W. S. (Knaresborough)
Brotherton, Joseph	Lewis, Geo. Cornewall (Herefordshire)
Callaghan, Daniel (Ireland)	Locke, Joseph (Honiton)
Clay, James (Hull)	Lushington, Charles
Cobden, Richard	Matheson, Colonel (Ashburton)
Duncan, George	Muntz, George Frederick
Dundas, Admiral (Greenwich)	O'Connell, Morgan John (Kerry)
Ebrington, Viscount	Price, Sir Robert (Hereford)
Fox, Wm. Johnson (Oldham)	Sheil, Rt. Hon. Richard Lalor (Ireland)
Greene, John (Kilkenny)	Smith, John Abel (Chichester)
Grenfell, Charles W. (Sandwich)	Stuart, Lord Dudley (Marylebone)
Grey, Rt. Hon. Sir G. (Northumberland)	Talfourd, Mr. Serjeant
Hawes, Benjamin	Tenison, Edward King (Ireland)
Hayter, William G.	Thompson, Colonel (Bradford)
Henry, Alexander	Tollemache, Hon. F. J. (Grantham)
Hobhouse, Right Hon. Sir John	Villiers, Hon. Chas. (Wolverhampton)
Hobhouse, Thomas Benjamin	Wood, Right Hon. Sir Chas. (Halifax)

Tellers for the Ayes—Mr. Tuffnell and Mr. Parker.

NOES.

Anstey, Thomas Chisholm (Ireland)	Mullings, Joseph Randolph
Beresford, William	Repton, George William John
Broadley, Henry	Reynolds, John (Dublin)
Burrell, Sir Charles M.	Robinson, George Richard
Disraeli, Benjamin	Seymer, Henry Ker (Dorset)
Dunne, Francis Plunket (Ireland)	Sidney, Mr. Alderman
Forester, Hon. George C. W.	Sotheron, Thomas Henry Sutton
Hamilton, Geo. A. (Dublin Univ.)	Taylor, Thomas Edward (Dublin)
Henley, Joseph Warner	Vyse, Richard H. R. Howard
Keogh, William (Ireland)	Willoughby, Sir Henry
Knox, Colonel	Wodehouse, Edmond
Lowther, Hon. Col. (Westmoreland)	Wyld, James
Morgan, Octavius (Monmouthshire)	

Tellers for the Noes—Lord George Bentinck and Mr. Newdegate.

HOUSE OF LORDS.

CONTENT.

DUKES.	Donegal.	BISHOPS.	Campbell.
Leinster.	Lansdowne.	Hereford.	Cottenham.
Norfolk.	EARLS.	Manchester.	De Mauley.
Wellington.	Fortescue.		Foley.
	Granville.	BARONS.	Holland.
MARQUISES.	Leitrim.	Beaumont.	Milford.
Breadalbane.	Minto.	Byron.	Monteagle.
Clanricarde.	Radnor.	Camoys.	Sudeley.

NON-CONTENT.

EARLS.	Mountcashel.	VISCOUNTS.	BARONS.
Cardigan.	Munster.	Hawarden.	De Lisle.
Falmouth.	Rosslyn.	St. Vincent.	Tenterden.
Lonsdale.			Wynford.

PAIRED.

Earl of Strafford.....Earl Desart.

We have given, in another column, a statistical history of the copper trade, and the changes in the duties on foreign copper ores, from a valued correspondent, without in the slightest degree, however, participating in the views expressed in his introduction, the fears he entertains of injury—nay, ruin—to the Cornish miner, or the conclusion he arrives at from the several facts. We take a very different view of the case; but, on a question of such importance, the MINING JOURNAL is, as it ought to be, open for a fair discussion on both sides—while the statistical facts alone will be found interesting and valuable. We also recommend to our readers' notice the sensible communication by Mr. WILLIAM BIRKMYRE—concisely showing that the reduction of duty has arisen from the choice of two evils, and that the abolition is the least; that it is the waste in smelting here which renders it so difficult to compete with foreign ores; and that a more scientific and lucrative system, by which the salts, alkalies, and sulphur, now thrown to the winds, might be saved, would be of more advantage to the Cornish miner than any protective duties.

One of the longest parliamentary sessions on record was terminated on Tuesday last, by a prorogation speech from her MAJESTY in person. We are not of the number of those who think that the protracted legislative incubation of the year, has been unproductive of the ordinary number of lively legislative chickens—that the lengthened labour of the mountain has, in fact, resulted in the birth merely of a mouse. We rather view the principal works of the session as the Premier views them. Considering it a period in which the Government was occupied in watching the changes which were making head throughout the whole of continental Europe, and also in guarding the peace of this empire against insurrectionary ferments of the Catholic population of Ireland, though filling its mind with these anxious cares, it was able to introduce 125 large ministerial measures, of which number, after debates sometimes vexatious and always procrastinating, they have carried 105, abandoning, or withdrawing, on account of the advanced period of the session, 20 out of the aggregate number introduced. As far as the particular interests with which we are connected are concerned, we think the legislation of the year has been liberal and beneficial. A further series of steps has been taken, and larger efforts made, to disencumber commerce of those restrictions by which her course was limited and held in; and though, as to the Copper and Lead Duties Bill, some inconvenience, partial in its extent and transient in its duration, may spring up whilst we are in the transition months of the process, and passing from a fettered to a free condition of things, yet we are satisfied that when those short days are over, trade will be all the better, the easier, and the richer, for the changes which, in their progress, may not have been without their momentary inconvenience. We may say the same thing, in substance, as to the spirit which animates the colonial policy of the administration, the course pursued is one in which freedom of commerce, and amelioration of the burthens pressing upon it, are the distinguishing and characteristic features. Notwithstanding the most parsimonious curtailment of the estimates, the expenses of the public service exceed the public income by about 2,000,000*l.* sterling—not spent, however, in the ordinary service of the state, but incurred by that out-of-the-way thing, the recent war in Caffraria, and the glut of Irish immigration into the Canadas. This latter charge on the imperial revenue will, we hope, operate as a warning to those who would urge forward emigration to any of the colonies, beyond the just and ascertained necessities of the case. By these few words, we do not mean to make ourselves, in any sense, the eulogists, either of the session or of the Government, but we think of the former, that considering the multitude of private bills perfected during its progress, and also the number of large public measures completed, that the session has borne—in these things, at least—an average proportion of fruitfulness.

Of the Ministry, also, we presume to think—keeping in view the great European movement it has had to watch, and the intestine disturbances on both sides St. George's Channel, which it has been their high task to counteract and suppress—that their administrative duties throughout the session, have been large, numerous, and absorbing. It seems to be almost necessary to remind the carping and hypercritical portions of the press, that we have not at anytime in England a Government of angels, but of men; and that the powers they exercise are necessarily limited by the adverse social and political elements which are at work around them. But we are now less looking back on the session, or on the conduct of the administration during its progress, than forward to the harvest, which, notwithstanding the fears a short time since entertained for its safety, will, there is no room to doubt, be gathered in with a fulness, which will give motives for joy and thanksgiving to millions. It is scarcely possible to estimate the blessings arising out of a full and plenteous harvest in these islands, compared with a deficient one; the former is in its nature so calculated to refresh the numerous branches of our indigenous industry, and the mining and manufacturing portions of it in particular, that no success in any of them is at all equivalent to our reaping and housing abundantly the Cereal fruits of the earth.

In another column we have given a detailed notice of an interesting series of experiments on the application of wrought iron to railway bridges, which took place, on Wednesday last, at the works of Messrs. FOX, HENDERSON, and Co., Birmingham, in the proof of a girder for a bridge, of 120 ft. span, constructed entirely of malleable iron, on a plan which has been recently introduced by that able and enterprising firm. The bridge is one of those intended to be erected on the extension of the Blackwall Railway, now in progress under the superintendence of Mr. LOCKE. About 150 gentlemen were assembled to witness the trial, among whom we observed Mr. MUNTZ, M.P., the MAYOR of Birmingham, Mr. VIGNOLES, the Messrs. BRAITHWAITE, and other eminent engineers. The beam was subjected to a load of 240 tons, being double the weight of a continuous train of locomotive engines, which was placed upon it in successive portions, commencing at one end, so as to imitate, as nearly as possible, the effect of the passage of a train over it; and, at each accession of load, the deflection at various points of the girder was carefully noted, the measurements of the makers being verified throughout by an independent series of observations, taken by Mr. RANKINE, of Edinburgh. The results were considered most satisfactory by all who were present, and equally creditable to the design, materials, and workmanship—the utmost deflection, under the extreme load of 240 tons, being 3½ in. At the close of the experiments, which occupied nearly five hours, the company adjourned to a tent, where an elegant entertainment had been provided by the hospitality of Messrs. FOX, HENDERSON, and Co.; and, after loyal and appropriate toasts had been honoured, the meeting separated.

Although a strong show of opposition was made at the half-yearly meeting of the CALEDONIAN RAILWAY COMPANY, on Thursday week—a report of which will be found in another column—against the general proceedings of the directors, and the re-election of those who went out by rotation, the report was carried by a large majority, and the result of the division must be highly gratifying to their feelings. The chairman, in his opening remarks, fully explained the advantages which would accrue from the connection of the Caledonian with the Scottish Central Railway by the Castlecary branch. Arrangements were being made, which, at no distant time, would secure to the Caledonian line the whole of the goods trade along the route by Dundee, Montrose, Arbroath, &c.; and, in the meantime, the great and important point was secured—the whole traffic to the north of England, to Glasgow, and the western district of Scotland; while the traffic to Edinburgh would go exclusively to the Edinburgh and Glasgow line. The directors have had very arduous duties to perform in watching the interests of the company, and satisfying the various contending interests, and we are happy to see they have the confidence of so large a majority of the shareholders. Sir ANDREW AGNEW, we find, renewed his eternal hypocritical bore about Sunday traffic, and, although defeated by a majority of 18,359 shares, and 7220 votes out of 8903, he has again given notice to bring it forward at the next meeting. In answer to a proprietor, the chairman informed the meeting, that with the exception of the station-masters, and, perhaps, a porter at each of the stations, the number of people employed was exactly the same as would be employed for the conveyance of the mails, if there was not a single passenger. With what grace, then, can this fanatical knight, after such an explanation, continually pester the meetings with his fulsome trash on the sinfulness of Sunday travelling, and with his puerile attempts to lessen the returns of the company some 2500*l.* a week, even at the present time, and which will, of course, greatly increase; while he would also debar thousands from preserving their health, who, confined to labour during six days of the week, have only the Sunday on which they have a chance of a country excursion, to breathe the fresh air. We should heartily rejoice to see the shareholders sending him to Coventry, by refusing to vote, or take any notice of his hypocritical vanity.

[FROM A CORRESPONDENT.]

"LA REINE LE VEUT."—"The QUEEN wills it."—"The QUEEN assents."—Such, on Tuesday, the 5th inst., was the crowning act of the memorable session of 1847-8; memorable, as it will prove, in Cornish annals, for the enactment of the "COPPER and LEAD DUTIES BILL."

In a case which involves the interests of a hundred thousand of our fellow-subjects, of all grades and classes, and the actual existence—or, as the alternative, the expatriation—of many thousands of that number, have the Ministers of the day put into the mouth of our most Gracious and Excellent QUEEN, words which affix the seal to an Act that dooms to serious and prolonged evil, a large proportion of as loyal, intelligent, and industrious a body of subjects as any in her MAJESTY'S dominions.

How, and by what means, this measure has been carried, we may, perhaps, be able sufficiently to explain. In its origin, based upon every species of misrepresentation and falsehood, to the promulgation of which, in the face of Parliament, the PREMIER lent himself on the 18th February;—with resolutions brought in on the 17th April, two months afterwards, at a late hour of the night, after harrassing debates and divisions upon an Irish Bill, and carried through the House by means of arguments and asseverations, many of which would disgrace any advocacy, so destitute were they of truth or justice, so tricky in their character, and so contradictory of previously-recorded opinions of the same speakers;—with the Bill, on its first introduction into the House, on the 8th of May, smuggled in, without notice, at the unseemly hour of one in the morning, before a sprinkling of Ministerial backers, and in violation of a distinct pledge, to give notice when it would be so brought in;—the measure then placed upon the orders of the day for a second reading, twice a week, upon the average, for four months, and as often deferred, keeping the supporters of the mining interest in an incessant state of anxiety and watchfulness during the whole of that period, lest its progress through that stage should be carried in the same clandestine manner as its first introduction;—then, on the 28th of August, between 10 and 11 at night—again, in violation of an engagement, that it should not be brought on late in the evening—reading a second time the Bill, to carry into effect a measure of this importance to our mining population, the debate terminating at two o'clock in the morning of the 29th;—the same evening being fixed for the committee, and, which will scarcely be credited, between three and four in the morning of the 30th—the House having been sitting, with a short adjournment of less than two hours, from noon of the preceding day—moving to go into that committee, which was successfully resisted;—the Bill, however, passing through committee on the evening of the same day—the report being received on the following day, and the succeeding one, the 1st of September, witnessing its last stages through the Lower House, by a majority of 38 to 25;—next in the Lords, its first reading taking place on the same day, being carried by a majority of 17 to 13—read a second time the next day, Saturday, the 2d of September—the two forms of committee and report being dispensed with;—read a third time and passed, on Monday, the 4th of September—the Royal Assent being given on Tuesday, the 5th of September.

By these means, and such as these, was a measure carried through Parliament, upon which hang the welfare and prosperity of an important national production, and of the hundred thousand persons

dependent upon it, directly and indirectly, for their support. It was a fitting close to one of the longest and most unprofitable sessions on record. Thus, four months and a half, from the 17th of April to the 28th August, were occupied in carrying it through two stages in the Commons, and seven days allowed for all the remaining formalties.

Such has been the disgraceful course pursued by Ministers, with reference to a measure of vital importance to large numbers of our population, and most essential to the general welfare of more than one of the counties, as well of Ireland as of England, and to that of the nation at large;—a measure which, it is not too much to say, had neither reason nor truth for its foundation—was supported, on the part of Government, by arguments of the same character—marked, throughout its progress, by every species of trickery and chicanery—and finally carried, in the last week of the most wearisome session which the country ever knew, by the votes of the devoted hacks of most unprincipled and incompetent masters. And what is the measure which has been dealt with in this extraordinary manner? We must devote a short space to the description of this trade from its origin, for the information of such of our readers as are not familiar with the subject.

The first authentic account which we have of copper produced in Cornwall, is in the year 1729, when 2216 tons of ore were sold—yielding, probably, 250 to 300 tons of copper. It was not until the year 1765 that the quantity of ore reached 18,425 tons, and the copper 2089 tons. The production went on, in an easy progression, until the year 1800, when there was raised 55,981 tons of ore, yielding 5187 tons of copper.

We shall now take the quantities of ore sold in Cornwall at the several periods, from 1808 down to the present time, when any changes took place in the duties levied upon foreign ores:—

Years.	Tons of ore sold in Cornwall.	Duty per ton upon foreign ores.
1808	67,867	£0 16 11
1809	76,245	0 16 8
1812	71,547	20 13 4
1813	74,047	20 15 10
1819	88,736	21 0 0
1825	110,964	12 0 0
1840	147,266	12 12 0
1842	154,180	

On ores not exceeding 15 per cent.	£3 3 0	
From 15 to 20 per cent.	4 14 6	Per ton of metal.
Above 20 per cent.	6 6 0	
From British possessions	1 1 0	

The average rate of duty, per ton of ore, from foreign countries, for the five years, 1843 to 1847, was	£1 2 6
From British possessions	0 4 4

This statement will enable our readers to follow us in some of the succeeding remarks; and we will especially call their attention to the fact, that, although in the years 1808 and 1809, the duty on foreign ores stood some shillings per ton below the average rate since the Act of 1842 was passed, yet, from 1812 for the next 30 years, it was altogether of a prohibitory character.

Previously to 1827, these prohibitory laws had operated to the total exclusion of all foreign ores for any purpose; but an Act was passed in that year, upon the *urgent representations of the English smelters*, to allow foreign copper ore to be smelted in bond; security being given to export, within six months, a quantity of copper equivalent to that which might, upon assay, be computed as the quantity of metallic copper contained in the ore so permitted to be smelted. Although this law was immediate in its operation, yet, from 1827, the year of its enactment, the quantity of foreign ore smelted under its provisions, did not reach 1000 tons per annum until the year 1833, a lapse of six years. In 1835, it amounted to nearly 7000 tons. And in 1842, it had reached about 44,000 tons.

Then came the *second* effort of the smelters, upon whose *urgent representation* the law was again changed; and, after a severe struggle with the British miner, it was finally settled as it stood previously to Tuesday last; upon a full understanding that the conditions then fixed would be permanent. So they might have been, had not the "unadorned eloquence" of Mr. COBDEN got the better of Sir ROBERT PEEL'S "consistency;" and led the way to the opening of the floodgates of the wild doctrine of *free trade*, which has since been sweeping away, in succession, nearly all the established principles of our commercial code.

As an abstract question, free trade is not opposed to our general views; but if we are to have free trade, let it, at least, be something unlike the Irishman's reciprocity—all on one side. If the advocates of that system can show us any country in which, to an extent worth notice, our surrender of protection to native industry has been met by corresponding relaxations, in our favour, of restrictive commercial law, we may be inclined to abandon much of our present objection. But they cannot show us any such thing. Do they seek it in America? There the average duty upon our articles is 27 or 28 per cent.; whilst for *one single article* which we import from thence, and which is admitted here *free of duty*—cotton wool—we have paid them, upon an average of the last seven or eight years, between four and five millions sterling per annum more than the *total value of all British and Irish produce and manufactures exported to the United States*. Moreover, for some months past, an extensive agitation has been going forward in America, for an increase of 5 or 10 per cent. to the import duties, which is likely to occupy the attention of Congress in the next session.

Have the numerous German States, parties to the "*Zollverein*," met us on terms of reciprocity? We ask in what important item of British export such a surrender of excessive duties is to be found in their tariffs?

But we will not travel over the world to cite the almost universal maintenance of their old laws; or, in many countries, the return for our liberality, in the shape of suggestions of larger or more prohibitory duties. We will content ourselves with quoting the instances of the two countries from which we import nearly the whole of our copper ores—the state of Chili and the Island of Cuba.

In Chili, the duties levied upon our goods average from 20 to 25 per cent. of their value; and upon this special article (copper), when imported there, it will average as much; and even their export duty upon ores and copper amounts to 7½ per cent. of their value, being, as regards ores, about the per centage of duty payable here, under the law of 1842, upon the prices that are realised for them in this country; the average duty actually paid upon Chilian ores, for the last four years, having been 7$\frac{9}{16}$ths per cent. upon the prices obtained here.

Our exports to Cuba pay an average duty of above 25 per cent.; and *sheet copper* is there charged with 38*l.* per ton; whilst our duty upon their copper ores, for the last four years, has averaged 6$\frac{3}{16}$ths per cent. upon the selling prices here. Do we discover, in these facts, anything to warrant the dissatisfaction said to exist in those countries, with respect to the duties we have hitherto charged upon their ores? We think not. But this is, to some extent, a digression from the main object of this article.

We have already shown that *two* changes of our law were made upon the *urgent representation of the smelters*. They began the present year with a *third urgent demand* to overturn all the arrangements made in 1842, with their full concurrence, as a substitute for the pre-existing prohibitory laws. They inoculated Lord JOHN RUSSELL with the belief that they were in a state of great distress; and on the 18th February, as already stated, his lordship, under the influence of their representations, made that exaggerated statement which was the forerunner of the change that has this week become law.

It has been stated in our columns, that, instead of the smelting trade of this country being in the position of danger in which Lord JOHN RUSSELL so falsely described it to be, as resulting from the then state of the law, there has not been a period, since the enactment of that law, or scarcely at any antecedent time, when the smelters have made so much money as during the year 1847. The proof of this is perfectly simple, and most conclusive:—

The prices paid by the smelters to the Cornish and Devonshire miners, for the quantity of ore equivalent to one ton of copper, was *less*, upon the average of 1847, than the average price of 1842, by	£12 5	2 per ton.
The average price charged by the smelter to the consumer, for cake copper, was *more*, in 1847, than the mean price of 1842, by	£6 0	0 per ton.
Making a clear additional advantage, in favour of the smelters, in 1847, over 1842, of	£18 5	2 per ton.
And the quantity of copper smelted in the year ending 30th June, 1847, having been	22,825 tons,	
It follows that the additonal profit of 18*l.* 5*s.* 2*d.* per ton, gained in 1847, gave them an increased amount of	£416,929	

This statement was made by Lord GEORGE BENTINCK in the House of Commons, in the debates upon this bill; and no contradiction of it was offered on behalf of the smelters, nor could any disproof of its accuracy be established, if attempted.

But, if such were the relative positions of the miner and the smelter in the year 1847—and the miner was, at that time, suffering severely under the then depressed standard—what is his position now, when, since the introduction of this measure into Parliament, the standard has fallen so much lower, that the ore necessary to produce a ton of copper has been further reduced in price—

In the quarter ending at Midsummer, as compared with last year	£15 9	7 per ton.
The price having been, in the last quarter	56 17	8 per ton.
Against the average of the year ending Midsummer, 1847, which was	£72 7	3 per ton.

Now, we know it will be said, that, if the price of ore has been reduced, so has that of copper. No doubt it has; and we will show how, and to what extent:—

The price of cake copper, from the 1st January to the 11th February, 1847, was	£88 10	0
To the 11th March, 1847, it was	93 0	0
To the 31st December, 1847, it was	98 0	0
And the exact average of 1847 was	£96 10	0 per ton.
The price from the 1st January to the 1st February, 1848, was	£98 0	0
To the 1st March, 1848, it was	93 0	0
To the 11th July, 1848, it was	88 10	0
And from the 11th July, 1848, it was	79 10	0
And the exact average of 1848, to the 5th Sept., the day on which the bill received the Royal Assent, was	£88 4	0 per ton.
The fall in the price of copper, then, from the highest price since the passing of the Act of 1842, to the low price of the 11th July—eight weeks ago—has been	£18 10	0 per ton.
Or	18 9-10ths	per cen.
And from the average price of last year to the average price of this year	£ 8 6	0 per ton,
Or	8½	per cent.
Whilst the fall in the price of ores to produce a ton of copper, in the quarter ending at Midsummer last, as compared with the average price of last year, is as above shown	£15 9	7 per ton.
Or	21 4-10ths	per cent
And, as compared with the average price of 1842, the average of the quarter to Midsummer last shows a fall of	£26 5	4
Or	31½	per cent.

The fall in the price of ores thus exceeding that in the price of copper by nearly 13 per cent., in each of the above comparative statements.

We might here, without impropriety, enter upon a more extended view of the question of smelting, its cost and advantages; but as our readers may have seen announcements, which have already appeared in the columns of the *Mining Journal*, of some measures which may shortly come in a more prominent manner before the public, we shall pass over, for the present, any details upon that head.

Another point, which occupied much attention in the recent debate upon the second reading of the bill, was the evidence afforded, by the actual importations of foreign ores in the present year, of the absence of all justification on the part of the Government, and their especial *protégés*—the smelters—for the allegations of that extensive diminution in the import of ores, by reason of the duties, which has been made one of their chief stalking horses. We will, in the first place, draw attention to certain accounts which have been published monthly during the present year, under the direction of the Board of Trade, exhibiting the imports and exports of the country, by comparison of the present with the two past years.

In the returns issued to the 5th July, embracing the business of the six months of the year which had then elapsed, and the corresponding period of the two preceding years, we find, under the title of copper, that duty was paid upon the following quantities:—

	Tons of Ore.	Tons of copper.
In the six months ending 5th July, 1846	25,035	
Stated to contain		5,162
In the six months ending 5th July, 1847	18,896	
Stated to contain		4,017
In the six months ending 5th July, 1848	27,155	
Stated to contain		1,319

The Board of Trade gives the accounts in this form, and boast of the accuracy of their returns. Therefore, any person, not familiar with the subject, would conclude that, although there may have been a large increase this year, in the quantity of ore imported, there was a very considerable falling off in the weight of metal contained in that ore. The plain fact is, that the 1319 tons of copper named in that account, represent the produce, not of 27,155 but of 6638 tons of ore, which paid duty in the first three months of the year; and between the 5th of April and the 5th of July—or, rather, between the 18th of April and the 5th of July (for not a ton was entered between the 5th and the 18th April), there was admitted to duty 20,517 tons of foreign ore; and how was that admitted?

It is stated above, that the average rate of duty paid, per ton of ore, for the last five years, was 1*l.* 2*s.* 6*d.*; and the duty upon 20,517 tons of ore, at that rate, is	£23,081
But, on the 18th April, the Government thought fit to issue a Treasury Order, for the admission of ores at 1*s.* per ton duty; which, upon the quantity so admitted, would be	£ 1,026
Deducting this sum from the amount which ought to have been paid according to law, there remains a difference, which is totally lost to the revenue, of	£22,055

Sacrificed in the short space of eleven weeks, between the 18th April and the 5th July.

These two points of confused or erroneous accounts published by Government, and the unconstitutional abandonment of duties, without the sanction of an Act of the United Legislature, our readers will have perceived, by the debates in our last Number, were ably and forcibly commented upon by Lord GEORGE BENTINCK and Mr. HENLEY, to whose charges Mr. LABOUCHERE made a most feeble and unsatisfactory reply. What was the right hon. gentleman's explanation? Why, that in the last three months of the return, the duty was charged on the ore, and not on the metal contained in it. Mr. HENLEY, thereupon, asked a very simple question—"Suppose this bill does not pass, how will you charge the duties?" This question, simple as it was, did not receive an answer, because it would have been most difficult to answer it. The only true answer that could have been given to it must have been—"We have no means of charging the duty.

The plain truth is, that Government had not only most unconstitutionally usurped the whole functions of the Legislature, by remitting the duty, and sacrificing 22,000*l.* of revenue, without the sanction of Parliament—thus annulling the provisions of an Act by their own *dictum*—but, if the bill had not passed, they had no means of charging the duty. So very loosely was the business done, that the authorities had not only not taken bonds from the importers, to pay the duties, if the bill should not become law, but they had not even armed themselves with the knowledge of what those duties would have been, by having assays made of the respective parcels of ores, in order to ascertain the quantity of metal upon which the duty would have accrued. The hon. Member for Bodmin (Mr. WYLD) gave notice of a motion for official returns upon these points; but the authorities admitted the facts, and the motion was, therefore, abandoned; and this is the business-like way of conducting the affairs of the first commercial country in the world!

But, to go back to the imports of ore for the last six months. The quantity paying duty in that period was 27,155 tons; being an excess over the same period in 1846, of 2120 tons, and over that of 1847, of 8259 tons. It may fairly be assumed, under all the circumstances of the encouragement afforded by the Government measure, that the importation of the remaining half of this year will, at least, equal that which has elapsed. Supposing it to be limited to that amount—

Then the quantity for the year will be	54,310 tons.
The average annual importation of the last five years, 1843 to 1847, was	52,103 tons.
The quantity this year will then exceed that average, by	2,207 tons.

If we go a little farther back, we shall find that the—

Average annual quantity of the five years, 1838 to 1842, was	39,464 tons.
The excess of this year, over the average of that term, will be	14,846 tons.
Again, the quantity of last year was	40,491 tons.
Therefore, this year will give an excess over the last, of	13,819 tons.

We might ask her MAJESTY'S Ministers, in what part of these statements they discover that cause of alarm with regard to diminished importations, which has been so long and loudly sounded in our ears?

Mr. WYLD drew the attention of the House, in a marked manner, to the relative value of the British and foreign mines, in a national point of view, with respect to the amounts circulated in this country for labour and materials, in the last four years, in connection with each class. There is scarcely a more striking feature in the whole case than this. How stands the fact?

The value of foreign ores, imported and sold in those four years, was	£3,344,094
The value of British ores, raised and sold in the same period, was	4,157,723

Of these respective values, there was expended, in this country, for labour and materials—

For the foreign mines, labour	£83,074	
" " materials	102,432	
Being a total amount of		£185,506
Constituting, upon the value of the ores, something more than		5½ p. ct.
For the British mines, labour	£2,549,133	
" " materials	964,487	
Being a total amount of		£3,513,620
And constituting, upon the value of the ores, something more than		84½ p. cent.

But, beyond the high national importance of this fact, what remains? The important consideration, that, after deducting from the residue of the value of the foreign ores, all the amounts payable for freights, insurances, duties, and profits, there remains no less a sum than 1,665,678*l.*, paid for foreign slave or Indian labour, and other disbursements in those countries of similar character, for raising these ores; and as Mr. WYLD said, in forcible terms, in the debate in committee, "Under the disguise of this Act, for the repeal of a small duty on copper ores, there was that concealed which would expose the produce of free labour to competition with that produced by slave labour. This was the first time, since the passing of the Emancipation Act, that it had been attempted to place the freemen of Cornwall (the British Isles) in competition with the slaves of Cuba. Such, however, was the fact. He (Mr. WYLD) held that the question of free-trade was not at all involved in the subject before them, and why? Because he maintained that the duty, which was called a protecting duty, was not a protecting duty at all, as he had thought he had shown the House the other night. But the question to which he had adverted just now, as involved in the bill, trivial as it might now seem, would, by-and-bye, assume a far greater importance; because, if the principle of a competition with the slave labour of different parts of the world was to be allowed to obtain, with regard to the free labour of our own population, it could scarcely be doubted, that it would be generally deprecated throughout this kingdom. (Hear, hear.) He was aware that it might be said, that Cuba was the only slave country with which the miners of Great Britain could be brought into competition. It was admitted, then—indeed it was a fact of which there was ample published evidence—that the mine proprietor of Cuba did employ slave labour; and he would ask that House, whether, after the sacrifice, on the part of this country, of 20,000,000*l.* of money, the gentlemen that occupied those (the Ministerial) benches, were prepared to give the lie to all their past acts and professions, by permitting the slave-cursed population of Cuba to be brought into competition with those whom he had the hononr to represent? Would it be believed, after all their talk of liberty and liberal institutions that such a principle could be tolerated?" The hon. gentleman enforced and confirmed this stirring appeal, by reference to the published work of a writer of great talent and experience, who, speaking of the Cobre Mines of Cuba, to which he paid a visit, says—"After all we had heard of the value and importance of these works, their actual extent did not fail to surprise us. We learned from Mr. Hardy [the British Consul, and one of the principal proprietors of the mines], that the labourers employed were nearly 900 in number; but, to our great regret, we found that more than the half of them were slaves, *some the property of the mining company*, and others hired out, as is not uncustomary (*for 50 years?*) from their owners in the neighbourhood. A considerable proportion of the residue consisted of Islenos, or free emigrants from the Canaries; and a year before our arrival, there had been 200 Englishmen from Cornwall; but a *sickly season had carried off the half of them, including two of the captains*, the brothers of the person who had kindly lent us the necessary attire for entering the 'bowels of the earth.'

"We were informed that the ordinary average produce is not more than 27 per cent.; but even that proportion is so great as to ensure enormous profits to the proprietors, in competing with the produce of our native mines of Cornwall, where 10, and even 8, per cent. are considered sufficient to afford a remunerating return." "Still if the general average be as high as 27 per cent., the profits of the company must be so great, as to insure a rapid fortune to the partners, who consisted originally of only four individuals."

At a later period of his work, the same writer, speaking of the mines of Brazil and Cuba, observes—"It is well known that the mines are worked by slave labour; so that every shareholder is not only a slave owner, but, by the purchases of newly-imported Africans, which are constantly made by the managers of the company, becomes a most efficient promoter and encourager of the slave trade. If those ladies and gentlemen, 'who live at home at ease,' were only to witness some portion of the enormities committed by means of their money, and to promote their advantage, they would spurn from them the contaminated gains, with loathing and disgust.'

And what are the "enormous profits" here spoken of? The company, whose works the writer was visiting, and to which the remark applies, it will be seen, by a report in our Journal of the 29th of July, have divided, for the last year's profits, 24,000*l.*, which the directors stated would have been 36,000*l.*, but for the diminution in the price of their ores, which have suffered, in that respect, as well as British. The difference in the effect is, however, important; for, whereas the diminution in the price of Cuba ores only reduced "enormous" *profits* to something less enormous, the effect upon the British mining interest is, in a large majority of cases, to sweep away all profit; and, in very numerous instances, so to dip into the cost, as to compel the abandonment of many of the mines, with "enormous" *losses* of capital invested.

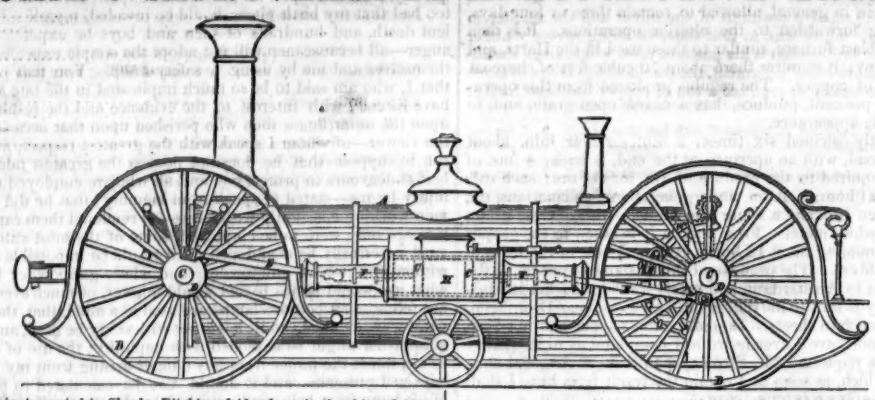
Who the "four individuals, the original partners" in the Cobre Mines, referred to in one of the above quotations, were, and how they disposed of portions of their interest, perhaps an hon. Member of the House, who voted in favour of this bill to swamp the mines of his own country, could tell us. And the same hon. gentleman, and some of his brother smelters, shareholders in the same company, could, probably, also enlighten us as to how many of the slaves were "the *property* of the mining company"—in contravention of the penal laws of England—and how many were "hired from their owners;" and whether for 30 or 50 years!

We must here pause for the moment. This article, although extended much beyond the ordinary length of our comments, has far from exhausted the subject, one of the most important that we have ever had to discuss in our columns; and matter of great moment still remains to be commented upon. We purpose entering upon the examination of the remaining points in our next Number, to which we crave the attention of our readers.

The recent destruction by fire of that fine American vessel, the *Ocean Monarch*, and the calamitous loss of life, arising out of that unhappy occurrence, are, we fear, events with which most of our readers are familiarly acquainted. This important ship had left the port of Liverpool but a few hours, with about 400 souls on board, when a fire was discovered to be issuing from the berth of one of the passengers, who, contrary to the regulations of the ship, had lit a fire for his own convenience The case of the passengers and crew was, of course, most afflicting. By the timely and heroic interposition of some vessels at the moment in sight, some 220 individuals were rescued from the burning wreck; and about 170 souls, with that fine vessel and cargo, perished, in a short hour or two, by drowning, burning, or suffocation. The *Alfonso*, Brazilian frigate, the steamer, *Prince of Wales*, and Mr. LITTLEDALE'S yacht, *Queen of the Ocean*, most honourably distinguished themselves by their exertions.

We point attention to the case, for three reasons—1. As a warning to emigrants how they transgress the 'tween decks regulations of the vessels in which they take passage, out of which disobedience a calamity so deplorable, as that of which we have spoken, arose.—2. As an encouragement to those who witness misfortunes at sea, to assist in limiting their extent by their active and courageous interference, the results of which, in the present instance, were the rescuing so large a number of individuals from an impending fate—and 3. To vindicate from the blame cast upon them, the captains of the two steamers who did not interfere, and especially the captain of the *Cambria*, who, after waiting a short time, pursued his voyage; for these reasons—that he was at a great distance to leeward, that he saw a plenty of help waiting around the unfortunate vessel, and that his own decks were so crowded with passengers that he scarcely could have been of any assistance if he had placed himself on bow or quarter of the burning ship. We think that these are intelligible and seamanly reasons for the course he pursued, knowing, as we do, that, before all things—before even humanity to others—the safety of his own vessel, and of those on board, is the first and greatest duty of every man who commands at sea.

RITCHIE'S IMPROVEMENTS IN LOCOMOTIVE ENGINES.



[Specification of patent granted to Charles Ritchie, of Aberdeen, in the shire of Aberdeen and kingdom of Scotland, engineer, for certain improvements in locomotive engines. Patent dated March 2, 1848.]

This invention consists in, and has reference to, certain improvements in locomotive and other engines, carried into practical effect by the means, or through the agency, of certain new, or improved, mechanical combinations and arrangements, having for their object the simplification of the construction, and the augmentation of the efficiency, of such engines.

The first part consists in the application of a cylinder, or cylinders, with two distinct and separate pistons in each cylinder, to which are affixed piston-rods, for imparting motion to the cranked axles and driving-wheels fixed thereon, whereby the rocking, or oscillating, motion attending locomotive engines, as hitherto constructed, is considerably diminished, and greater steadiness of motion obtained, as, by this arrangement, the momentum of one piston, together with its cranks, and other connections, is at all times exactly balanced, or nearly so, by that of the other, in consequence of the approaching or receding of the pistons to and from each other being always simultaneous. The second part relates to an improved mode of working the slide-valves of locomotive and other engines, by rendering the eccentric, which imparts motion thereto, available for the purpose of reversing the engine. The third part relates to an improved valve for regulating the admission of steam, or other motive power, to the working cylinders of locomotive and other engines, and to improvements in safety-valves, to be applied to the boilers of engines, or other reservoirs of power. The fourth part relates to an improved antiprimer, or steam-collector, to be applied to the boilers of steam-engines. The fifth part relates to an improved self-acting feeding apparatus, for supplying water to the boilers of steam-engines. And the sixth and last part consists in the application to the wheels of locomotive engines of an improved guard, or safety-break.

The drawing exhibits a side elevation of a locomotive engine, constructed according to this invention. A marks the boiler of the engine; B, the driving-wheels fixed upon the crank axles, C; the boss, or nave, D, of each of such wheels serving as the crank, to which one end of a connecting-rod, E, is attached by a crank-pin, or stud, *a*, secured to the said nave, and the opposite end of the rod, E, is connected to the piston-rod, F, in the usual way of forming such connections. G,G, two pistons, to which are attached the rods, F,F—the said pistons working steam-tight in the cylinder, H, by means of metallic, or other packing.

The cylinders, H, are securely fixed to each side of the boiler, A, in any convenient manner. Instead of having the fixed cylinder and connecting-rods, as above described, oscillating cylinders may be used, with their piston-rods connected directly with the crank-axle; or where fixed cylinders are used, and space is an object, the connecting-rods, E, E, may be dispensed with, by attaching to the piston-rods a cross frame, in which there is a slot formed, into which a crank-pin, or stud, takes. The outer end of the frame works through a guide-hole, fixed to the side of the engine, and thus the rectilinear motion of the piston-rods imparts rotary motion to the crank-axle and driving-wheels fixed thereon. Now, as either of these methods will occupy less space than that exhibited by the drawing, it will appear evident, that these arrangements are more particularly intended to be used for short engines, in which there is not sufficient distance between the axles to admit of the adoption of the other arrangement; or, instead of one long cylinder, two short cylinders may be employed, each having a separate piston—the bottoms of the cylinders being made to abutt against each other, are securely connected together in that position. The steam, or other motive-power, may be admitted through the ports, or passages, into the cylinder, by means of a common slide, which may be actuated in the following manner:—Upon the hindermost driving axle is fixed an eccentric, upon which is a cam, of the following peculiar construction:—Two rods are fixed to, or formed upon, the said cam; or it may be composed of one double-gabbed rod, one gab being employed for effecting the backward, and the other the forward, motion of the slide-valve, through the intervention of a double lever, which has its fulcrum upon a stud, fixed to the side of the boiler, as shown by the drawing, and this lever is connected to the slide-valve by a rod, *c*. The length of this lever, as also the angle of inclination of the parts, O, O, should be in accordance with the lead of the valve—the one or other of the inclined parts, O, being caused to act upon the lever by a hand lever, connected to the said cam in any convenient manner, so as to enable the engine-driver to start, reverse, and stop the engine readily, by the same eccentric which gives motion to the slide-valve. By making the end of the valve-rod moveable, as in a slot in the lever, P, the steam may be worked expansively at pleasure. Improved spring safety-valves are exhibited by other drawings attached to this specification, from which it will appear there are two forms of construction, showing a valve with a conical-shaped seat, being a flat valve, and constructed with a flange, which the inventor terms a compensation flange—such flange being let into the seat vertically, about one-sixth of the diameter of the steam-way in the valve seat. This valve is weighted by a helical spring, of sufficient power, according to the required pressure of the steam; and when it is intended to be used as a reserve safety-valve, the spring is to be placed around that part of the stem below the valve—that is to say, within the boiler. The advantage of this form of construction of valve over the ordinary valve is as follows:—As soon as the pressure of the steam raises the valve from its seat, the flange, being exposed to the pressure of the steam, presents an increased surface, which compensates for the increasing resistance of the helical spring, until the valve has been raised to a height equal to the area of the steam-way, when it allows the steam, or vapour, to escape freely. When not intended as a reserve safety-valve, this valve may have the spring placed above it. Another valve, which is called an indicator safety-valve, is exhibited, consisting of a piston, which is fitted into a tube, having a spring attached to it—lateral openings being made in the tube, to allow the steam to escape when the piston becomes raised above such openings, and by making the said tube moveable within another one, the "blowing off" point may be varied at pleasure. An index, like that of a barometer, may then be attached to the stem, or rod, of the piston, and will indicate very slight variations of pressure. A regulating valve is attached, the construction and arrangement of which is as follows:—There is a short socket-pipe, having two conical valve seats formed therein, into which the valves fit—such valves being connected together, or formed upon one stem, into which one end of a rod is screwed, or otherwise made fast, and the opposite end of the said rod attached to an eccentric spindle, working through a stuffing-box, to which a hand lever is fixed—such lever and rod being for the purpose of opening, or closing, the regulator valve at pleasure.

The anti-primer before-mentioned is formed in the following manner:—Two distinct and separate plates of sheet metal, the outer edges of which are securely fixed to the inside of the boiler, by riveiting, or otherwise, the said plates being inclined towards the centre of the boiler, care being taken to leave a space between the inner edges of the two plates, so as to reserve a channel lengthwise of the boiler, for the passage of steam into the steam-chamber thus formed, and within, or in connection with which the regulating valve is situate the steam pipes which lead to the cylinders being connected thereto. Instead of forming the anti-primer of two separate strips, or pieces, of metal, the same result may be obtained, by forming it of one strip, or piece, of metal, of the shape shown—the said plate being pierced with an infinite number of small holes. The construction and arrangement of the feeding apparatus are as follows:—There is a metal cylinder, which should be bored perfectly true and cylindrical, fitted with a piston, the rod of such piston forming the plunger, or ram, of the cold water pump, the barrel of which serves as a compound gland for the stuffing-box of the cylinder and pump-barrel. The slide valve, which may be made to cover or uncover the ports, or passages, in the cylinder, by the opposite sides of the piston coming into contact with the levers, which are connected to the slide valve by a rod or rods. There are spherical valves (the seats of which are knife-edged), formed within the spherical flange pieces, which have openings for establishing a communication between the tender, the pump-barrel, and the steam-boiler, as exhibited. The *modus operandi* of this feeding apparatus is as follows:—Upon steam being admitted from the boiler into the cylinder, through the steam port, or passage, the piston will be acted upon, and the ram, or plunger, be withdrawn, the water from the tenders will raise the valve, and enter the barrel, to supply the space previously occupied by the plunger, or ram; by this time the piston will have acted upon the lever, so as to cause the slide valve to uncover the port, or passage, and cover the port, or passage, P^1, thereby allowing the steam on the other side of the piston to escape through the exhaust pipe; the piston will now be impelled in a contrary direction, and the plunger, or ram, entering the barrel, will cause the one valve to be closed, and the other to be opened by pressure of the water therein, which as the plunger, or ram, advances, will be forced into the boiler, to supply, the deficiency of that water which has been converted into steam; R^1, R^1, mark wheel-guards, or safety-breaks, which are each composed of a strong band, or strap, of iron, or other substance, which is placed like a splasher over the wheel to be protected, the inner surface of the said guard, or break, is formed of the converse shape to that of the tyre, and fixed securely to the framing, or boiler, or both, as near to the top of the wheel as the play of the bearing springs will admit of, and as near to the back of each wheel, as possible, without touching it.

To each side of the engine a bar of iron is placed, and securely fixed in a longitudinal direction—such arrangement being intended to preserve such wheels in a vertical position, and thereby support the engine, in the event of the axles breaking, and to operate at the same time as a break, to retard the motion of the engine, in the event of any such accident. Another improvement in locomotive engines consists in arranging that part of the boiler known as the fire-box, in such manner that the height of the water in this part of the boiler shall at all times be at a proper level, which is effected by what is called an anti-fluctuator, which is a separate partition plate across the water space, or an extension of the plate to which the tubes are fixed as shown; and, by causing the water to be fed to the boiler at that part which surrounds the fire, it will appear evident that the barrel of the boiler can only receive its supply of water from that which overflows the said partition plate. Having described the nature of his invention, the patentee remarks, that he does not claim the exclusive use of any of the separate parts above-mentioned and referred to, when considered, *per se*, and apart from the purposes of the said invention, as hereinbefore set forth and described. What he does claim being—1. The use and application to locomotive and other engines of one or more cylinders, having two distinct and separate pistons working therein—such cylinder, or cylinders, being placed between two driving or crank axles, to which they impart motion; and, further, the mechanical combinations and arrangements employed for working such cylinder, or cylinders, by one slide-valve, as hereinbefore particularly set forth (and represented at *figs.* 1, 2, 3, 4, 5 of the drawings annexed to specification).—2. The use and application to locomotive and other engines of two eccentric rods, or one double-gabbed rod, in connection with one common eccentric, for the purpose of effecting the reversing motion of the engine, as hereinbefore particularly described (and represented at *fig.* 5 of the drawings annexed to specification).—3. The use and application to locomotive engines of a regulator, composed of two valves, which may be either conical or flat, as hereinbefore particularly described (and represented at *figs.* 2 and 7 of the drawings annexed to specification).—4. The construction of safety-valves with a flange, termed a compensation flange, without regard to the manner in which such valves may be weighted, as hereinbefore particularly described (and represented at *fig.* 7 of the drawings annexed to specification).—5. The use and application to locomotive and other engines of an indicator safety-valve, as hereinbefore described (and exhibited at *fig.* 2 of the drawings annexed to specification).—6. The use and application to the boilers of locomotive and other engines of an anti-primer, or steam collector, of the construction hereinbefore particularly described (and exhibited at *figs.* 2 and 3 of the drawings annexed to specification).—7. The use and application to locomotive and other engines of a self-acting feeding apparatus, distinct and separate from the working parts of engines, as hereinbefore particularly described (and represented at *figs.* 2 and 6 of the drawings annexed to specification).—8. The use and application to the wheels of locomotive engines of a wheel-guard, or safety-break, of the construction before described (and exhibited at *figs.* 1, 2, 3, 4 of the drawings annexed to specification).—9. The use and application to the boilers of locomotive and other engines, where tubular boilers are used, of a partition plate, so as to preserve the water in that part of the boiler above the fire at a proper level, and also to prevent the general fluctuation, as hereinbefore particularly described and set forth (and represented at *fig.* 2 of the drawings annexed to specification).

Patent-office and Designs Registry, 210, *Strand, Sept.* 4.

PREVENTION OF BOILER EXPLOSIONS.—The often-repeated occurrence of explosions in the boilers of steam-engines, and the awful loss of life, limbs, and property which are almost their common accompaniments, induce us to lay before our readers every plan at all likely to be of service in preventing, or lessening, these deplorable accidents. We last week inserted a diagram and description of a steam regulator, the invention of Mr. Manley, of Manchester, and we have since received a communication from Mr. Heath, C.E. and mine surveyor, of Hanley, in the Potteries, describing a regulator which he has adopted, and which we now proceed to describe, leaving, of course, our engineering readers to form their own opinions of their respective merits. A water tank, formed of iron water-pipes—say, 12 inches diameter—is placed in a convenient position with the boiler, of any height required, with a cover bolted down steam-tight, and having from the top a communication with a reservoir, to enable it to be supplied with water, when necessary. From the bottom of this tank a pipe proceeds into the side of the boiler above the usual water line, terminating in a rose end, and has a valve opening outwards from the tank, and weighted to any required pressure to open it. In addition to the usual blow-off valve, the boiler is furnished on its top with two valves, with weights hung inside the boiler, and covered by a box, to be kept locked, and thus prevent the tampering with it by the men in attendance. From this box a pipe proceeds to the upper part of the tank above the water line, and the action of the apparatus is as follows:—Should the usual safety-valve become, by any means, fast, or incapable of letting off sufficient steam, one or both of the valves in the box admit a rush of steam to the surface, when the pressure immediately acts on the column of water, forcing a stream of water, in the form of rain, through the steam in the boiler, which it immediately condenses, takes off the pressure, and the valves immediately close. The whole, it will be thus seen, is perfectly self-acting, and only needs regulating the weights to the power required.

THAMES TUNNEL COMPANY.

The number of passengers who passed through the Tunnel in the week ending Sept. 2, was 16,349; amount of money, £68 2s. 5d.

WROUGHT-IRON BOWSTRING GIRDERS FOR BRIDGES.

The above diagram represents a wrought-iron rib, or girder, now being employed in the construction of bridges, of 120 feet and 130 feet span, at Messrs. Fox, Henderson, and Co.'s establishment, the London Works, near Birmingham, under the superintendence of Mr. Joseph Locke, C.E., M.P.; and bridges of similar construction will shortly be erected on the extension line of the Blackwall Railway. On Wednesday last one of them was publicly tested at the works, in the presence of Captains Simmons and Wynne, R.E., the Government Inspectors of Railways; Lieut. Douglas Galton, R.E., the Secretary to the Government Board of Commissioners for inquiring into the strength of iron, was present on behalf of the board; Mr. G. F. Muntz, M.P.; the Mayor of Birmingham (Mr. C. Geach); Messrs. Charles Vignoles, W. Fairbairn, J. Whitworth, C. B. Ker, W. J. Stanton, C. H. Wild, Professor Cowper, and between 80 and 90 other scientific gentlemen and engineers attended to witness the trial. The bridge-rib had been erected, ready for proof, in an open space in front of the London Works, and presented a clear span of 120 ft. between the bearings. It is constructed entirely of wrought-iron, and consists of an arch of boiler plates and angle iron, tied across at the ends by horizontal bars; and the tie bars are connected with the arch by vertical standards, and by a double system of diagonals, which have the effect of distributing over the whole curve of the arch the action of weights placed on, or passing over, any point of the bridge. The proof was applied by loading the bridge-rib with 240 tons of rails, bars, &c.; and it produced the following satisfactory results, as the weight was applied:—

Weight in tons of rails, &c., placed on the cross girders.	Extreme amount of deflection produced at centre of arch.
34½ tons	0 1-16th inches.
68½ „	0 5-8ths „
102¾ „	1 5-16ths „
137 „	2 1-8th „
171¼ „	2 3-4ths „
205½ „	3 5-16ths „
240 „	3 11-16ths „

The proof weight was fixed at 240 tons, as being double the greatest load which the bridge can by any possibility be ever required to bear. A heavy goods' train weighs less than half a ton per foot lineal; a train, consisting entirely of locomotive engines (which would be the heaviest of all possible trains) would only weigh one ton per foot lineal, and, consequently, would place a load of not more than 120 tons on a bridge of 120 feet span. The new bowstring bridge has, therefore, been proved to twice the weight which ever can be placed upon it, and to four times the weight which it is ever likely to have to bear. It is scarcely necessary to add, that the trial gave great satisfaction to all parties. These ribs are adapted for large spans, in cases where either headway is of importance, or where sufficient abutment cannot be obtained, without very heavy expense. Bridges constructed of these ribs may be employed with perfect safety for very large spans, in precisely the same manner as ordinary girders are used for small ones. The strength of the bridge depends upon the rib, or arch, and on the tie-bars by which the extremities are held together. The vertical standards are introduced, partly to suspend the load from the arch, and partly to obtain longitudinal and transverse firmness; they also support the tie-bars. The diagonals are employed for the purpose of preventing undue deflection in the rib, when the bridge is unequally loaded. The rib itself is constructed of boiler-plates and angle-iron rivetted up in the form of a square hollow trunk; it is strongly tied together, so that the full section of the plates and angle-iron may be depended upon to resist the crushing strain. In order to give this trunk additional lateral stiffness, the side plates, which form the top, are made to overhang, and are strengthened on the edges by angle-iron, &c. The tie-bars measure about 8 in., by 1 in. each, and are introduced in sufficient number to take the whole strain. The ribs are supported at each end on cast-iron shoes, fixed at one end to the piers, and mounted at the other on sliding frames and rollers. This arrangement provides, not only for expansion and contraction, but also for motion under a very heavy load. The action of these parts under proof has been found to be perfect. Cross girders, constructed entirely of wrought-iron, are suspended between the ribs. Besides the above experiments on the Blackwall extension bridge, the two ribs for a bridge, 130 feet span, have been proved with a weight of 260 tons—*i. e.*, 2 tons per foot lineal—each, put on in dead weight, by suspending cast-iron cross girders underneath the points where the wrought-iron girders are intended to be attached, and by placing thereon 260 tons of rails, pigs, bars, &c. In proving, the load was first put on two points at one end, then on the next two points, and so on, in order to produce, as nearly as possible the same effect as the passage of a heavily-loaded train. In the case of one rib, the load was allowed to remain for several days, and then removed. After the lapse of a few days, the same load was replaced, and again allowed to remain some days. The results were very satisfactory.

During the process of proving, observations were taken with a dumpy level, placed at a distance; and the sinking of the bearing plates in the ground was observed and noted. The bridges now being constructed, are intended to carry a double line of rails; and the test applied is, therefore, equal to 2 tons to each foot lineal of single line of way. This test was fixed upon in the belief, that the greatest possible load which can in working be placed upon each line of rails, is about 1 ton per foot lineal; and that, to provide for the additional strain caused by the rapid motion, &c., of the practical load of trains passing, the proof weight ought to be fixed at double the greatest possible load. In very large spans (say, 400 ft., and upwards), it would be necessary, on many accounts, to use four ribs, instead of two, and to brace all the four ribs together overhead, so as to obtain additional transverse stiffness.

IMPROVEMENTS IN PERFORATING GLASS FOR VENTILATION.—A patent has been secured by Mr. J. Lochhead, of Milton, Gravesend, for an improved mode of forming sheets of perforated glass, of various patterns, to be used for purposes of ventilation in houses, ships, &c. In forming plates, sheets, lenses, or other forms of glass, or other vitrified substances, the metal, or glass, when in a semi-fluid state, is poured from the pot on to the casting table—the stream being followed by a pressure roller, for the purpose of flattening it; and, while the glass is in a plastic state, a metal mould, with teeth, or projections, on its under side, according to the pattern required, is applied to the surface, forcibly pressed down, and left in that position until the glass has set; after which it is to be removed, and the glass will be found to be perforated, in corresponding shapes to the projections on the mould. To effect this in the most complete manner, a screw-press, made to the size of the casting-table, is used, very similar to a common copying-press, and different pattern moulds being fixed to the lower end of the screw, and worked by a cross handle.

IMPROVEMENTS IN OBTAINING OXIDE OF ZINC FROM THE ORE.—M. C. A. F. Rochaz, of Paris, has taken out a patent of an improved method of obtaining oxide of zinc, and treatment of zinc ores. The patentee states, that by this improved process, the employment of retorts, as by the old method, is dispensed with, the fuel and labour greatly economised, the operation completely independent of the skill of the workman, and the loss of metal, incidental to the old method, prevented. Ores of lead and zinc may be operated on at once. The principal feature consists in the reduction of the native sulphuret of zinc (blende), and of the carbonates, oxides, and silicates of zinc, and sulphurets and oxides of lead, by the action of the reducing gases of a blast-furnace, by which the scoria, or slag, is fused, and the zinc volatilised; the vapours are then condensed, and conducted into a reservoir, situated over the mouth of the furnace, and heated by the gases therefrom. The furnace having been heated to the required temperature by the combustion of fuel alone, a charge of any kind of the above zinc ores, mixed with a suitable flux, is introduced into the charging aperture, and, by means of a cover above, and a sliding plate below, none of the gases are allowed to escape. The charge thus falls upon a layer of incandescent fuel; a layer of fuel is then poured upon the ore; then another charge of ore, until the furnace is full, and it is to be replenished as the charge sinks below a certain depth. The zinc is thus volatilised by the heat, and the scoria falls into the lower part of the furnace; the gases and volatilised zinc pass through proper openings through a hydraulic main, and there deposit any zinc carried with them.

Original Correspondence.

THE MINING INTERESTS OF CORNWALL.

Sir,—There can be no question, that the repeal of the duties on copper and its ore will be attended with much suffering in Cornwall; but the abolition is, to say the worst of it, the least of two evils; for if the duties were not repealed, they would have been a greater stimulus to other countries to undertake, or increase, their works, with the object of reducing the copper from its ore in the vicinity of the mines. This must be evident from the following facts:—The late duty having been 1*l.* 1s. a ton on ore of any degree of richness from our colonies, and freight (by the last advices), from Port Adelaide, 4*l.*—say, on 20 per cent. ores—equal to 25*l.* 5s. per ton of copper—as the duty on a ton of copper from a British possession was only 4*l.* 4s. + 4*l.* for freight = 8*l.* 4s., there was obviously a stronger reason for reducing the copper ores on the spot than there is now. The difference in favour of smelting copper in South Australia, from ores containing 20 per cent. of copper, is even now no less than 16*l.* a ton of copper, which is equivalent to 21*l.* per 100*l.*, as the present cash price of tile copper is 76*l.* 2s. 11d. per ton; but, as this difference depends upon the cost of freight, there is not the slightest probability that it can be maintained.

The unusual demand for shipping, in consequence of the scarcity in Europe, having had the effect of raising the freights on copper ore much above the average everywhere, the recent large importations of copper ores being, probably, more a consequence of the falling off in the price of freights, than to any understood agreement between the Government and the importers, that the duties would be taken off in the course of the session. If, then, there be less encouragement to undertake smelting operations in the colonies, there is also much less in foreign countries, inasmuch as the duty on foreign copper ore, containing 20 per cent. metal, was 4*l.* 10s., on which an additional 5 per cent. was imposed (8 and 9 Vic., c. 90) 1*l.* 2s. 6d. = 23*l.* 12s. per ton of metal, to which add freight—say, 5*l.* 12s., from Valparaiso = 28*l.*, making the total expenses of importing, 51*l.* 12s. 6d. per ton of copper—the amount of duty on a ton of copper from a foreign country having been 9*l.* 3s. 9d., which duty, it will be recollected, was less by 14*l.* 8s. 9d., compared with the duty on the copper in the ores—making the difference, at that time, in favour of smelting foreign ores of 20 per cent. on the spot 31*l.* 11s. 9d., which is now reduced, by the repeal of the duty of 9*l.* 3s. 9d., to 22*l.* 8s. per ton, or 29*l.* 8s. 3d. per 100*l.*

Now, in reference to matters nearer home, it is the prodigious waste in smelting here that is making it so difficult for the miner of this country to withstand foreign competition. It may seem incredible, that of 163,396 tons 16 cwts. of copper ores sold in Cornwall in the year ending the 30th of last June, about 36,764 tons of sulphur, or 22½ per cent., were absolutely wasted in the process of smeltiug. This quantity of sulphur, with the other advantages which the county possesses for smelting, might have produced, by the decomposition of salt in crystals of soda, at the low price of 4*l.* per ton, and alkali, at 36 per cent., at the equally low price of 7*l.* per ton, the enormous profit, in one year, of 1,000,000*l.*

Can the neglect, at this time of day, of so much wealth in the ores of Cornwall be unattended with distress?—it is impossible. This crying neglect would probably not have existed so long, had the efforts which you and others made, about 10 years ago, to establish a Mining College, succeeded; for we have a memorable example of the good which flows from such institutions, in the knowledge that the hot-blast discovery was made by a former pupil of the Andersonian University, Glasgow, and was carried out by two pupils of the present distinguished Professor of Chemistry of Glasgow College. This improvement chiefly, if not alone, having increased the make of iron in Scotland, from 37,500 tons, in 1830, to 600,000 tons in 1846.—William Birkmyre: *Sept.* 7.

THE COPPER TRADE.

Sir,—I have been much interested with the late communications in the *Mining Journal* on the depressed state of copper mining, from the very low prices now obtaining for copper ores, while the price of copper has not fallen in the same proportion. The extraordinary high rate of charge still retained by the smelting or copper companies, notwithstanding the improvements and economy with which the process of smelting is now conducted, the extra 1 cwt. to each ton of ore taken from the miners, the manner in which the assays of copper ore are now made—the produce of the sample being refined to the utmost degree of purity, while merchantable copper is sold probably at 20 per cent. lower degree of fineness than the rate at which the copper in the ore is fixed for the payment of the producer—are some of the results arising from the long-existing monopoly of the business of smelting being still in the hands of about half-a-dozen companies; and, as the various bearings of this oppressive grievance are so well understood by the producers of copper ores, it is not at present necessary to enter more fully into them; suffice it that, if the miner could even now obtain the market value of the copper in his ore, after allowing the smelter a liberal payment for its manufacture, and an equally liberal charge for his advances before the copper is sold, I assert the condition of our home copper mines would be that of comparative prosperity, instead of impending ruin.

I am of opinion, that a reform, or reconstruction, of the relations now existing between the producers of the ores and the smelters, is a matter of much more vital importance than the question of repealing or continuing any tax on the importation of foreign ore or copper, my impression being quite in accordance with the opinion of your correspondent, "Delta," in last week's Journal—that companies working foreign mines would never have resorted to the great expenses of smelting abroad, and importing coals at enormous freights, if they could obtain at Swansea the fair value of their ores. The judicious remarks of "Delta," upon this important subject, have led me to suggest to him, or others conversant with the operative details of copper smelting, the great service they would render to the mining interest by favouring us with the leading particulars calculated to induce mining companies to undertake the smelting of their own ores. The difficulties in the way of coal seem pretty well cleared up, from the fact, that its cost of transit will not, on an average, probably exceed that of the ore now incurred to the smelting-works; and it is to be presumed, that a satisfactory mixture of ores may be obtained by a co-operation of the mines of a district, and the purchase of an occasional cargo of rich foreign ore. It does not appear that a smelting establishment, capable of working into copper the produce of one or two large mines, would involve any large outlay—the principal consideration being the power to sustain the mine-costs, while advancing those of smelting, previous to receiving payment for the copper. It is, however, quite obvious that, in a short time, the retaining to themselves the great advantages now enjoyed by the smelting monopoly, by the means alluded to, would impart new life to the now languishing mining interest.—A Copper Miner: *Sept.* 5.

COPPER SHEATHING.

Sir,—I should not again have trespassed on your valuable columns, regarding this subject, had not the remarks of Mr. Prideaux, in your last week's Journal, imperatively called upon me to do so. The interest that he appears to take on this important subject, and the endeavours he has shown to elicit any information connected with it, cannot but be considered highly praiseworthy; and no doubt, from the general sensation the mooting of this question has caused, some valuable hints may be gathered; and I am most happy to contribute my mite to the general good. I have placed myself in communication with the merchants who, in general, sheath the Norwegian vessels; and I have no doubt, in a short period, I shall be able to place in your hands samples of their copper sheathing. With regard to the first question of the assays of copper made at Roraas, this is invariably done by the humid way, and, consequently, cannot practically be depended upon; very few of the Norwegian metallurgists understand the convential practice of assaying by fire. No change in the manipulation of their ores has taken place within the last 20 years. A residence of several months at Roraas, and having carefully watched the operations conducted there, enables me, for the information of your readers, to give a short account of the processes conducted there. The ore, which is the common copper pyrites, containing a large proportion of sulphur, when brought from the mine, is spalled to about the size of a walnut. A round kiln, built of dry stones, about 3 ft. high, with apertures at short intervals, is constructed; two cubic fathoms of wood are laid in the bottom; on this the ore is placed; this quantity of wood, in general, is supposed to be sufficient for the calcination of 100 tons of ore. When lit, the mass generally burns for three weeks; towards the close of the operation, smalls are thrown on the pile, to prevent the too rapid calcination of the ore. As soon as the fire has ceased, the kiln is opened, and the ore is then wheeled to the smelting-works; if properly calcined, it has a dark red appearance, and is exceedingly friable; great care is required in this operation, as too much heat will cause the ore to melt, and a regulus will be formed. The ore is, in general, allowed to remain three or four days, previous to its being forwarded to the ulterior operations. It is then melted in a common blast-furnace, similar to those used in the Hartz, and other parts of Germany; it requires there about 70 cubic feet of charcoal to smelt 8 cubic feet of copper. The regulus produced from this operation is from 15 to 20 per cent. produce, has a coarse open grain, and, in general, a deep purple appearance.

This is subsequently calcined six times; a semi-circular kiln, about 6 ft. long by 2 ft. broad, with an aperture at the end, is built; 4 fms. of wood is in general required to the produce of 100 tons of ore; each calcination takes about 24 hours. After undergoing these calcinations, the regulus assumes, when broken, a white appearance, with a close grain, somewhat similar to white metal. From thence it is taken to the copper furnace, and after remaining there 12 hours, is tapped out in the form of rose copper (gahn kobber). The produce of this is about 94 per cent.; the greater portion is sent to Amsterdam, and meets a ready market in Holland; a small quantity is sent to the refinery at Leir Foss, near Drontheim, to be refined and rolled into sheets. In general this copper has not been found to foul at sea, nor have I ever heard any complaint as to its quality or durability. I have requested Mr. Stromeyer to make a chemical analysis of the copper, which, as soon as I obtain the result from him, I shall communicate to you.—Germanicus: *Sept.* 7.

COPPER SHEATHING.

Sir,—I should have thought that my communication of the 23d August, on this subject, was sufficiently intelligible to inform Mr. Prideaux, why copper, denominated "blistered," is preferable to a coarser metal for refining purposes; and, if he would again take the pains to refer to it, he will be able to discover the reason. The refining furnace is for a *specific purpose*, and is not adapted, nor was it intended, to receive any other metals, or impurities, along with the copper. When the refiner has to do the work in his furnace that should have been done in the roaster, he invariably finds considerable difficulty in making tough copper, because, in order to get rid of the sulphur, &c., he often poles his metal too much, and throws it over its proper pitch, and, therefore, renders it brittle, and of an inferior quality. This will, I hope, show Mr. Prideaux that all alloys, or, at least, all that possibly can, should be oxidised prior to the copper being put into the refining-furnace.

Roasting is decidedly the best of all the processes for purifying all qualities of copper. A very small portion of sulphur, I conceive, would not do much harm in the refinery, as it can be poled off; but it would be preferable to get rid of it, if possible, in the lower degrees—viz.: in calcining the ores, because, in carrying it forward in the other stages, it becomes hardened, and more combined, and, therefore, tends, in some measure, to carry along with it a portion of the copper. A Roaster-Man.

Swansea, Sept. 5.

COPPER SHEATHING—ITS WEAR AND TEAR.

Sir,—With respect to the observations of "A Roaster Man," in your last week's *Mining Journal*, I think the practice of tapping from the roaster into the refinery furnace has been in practice since 1837 or 1838, but there are only two smelting companies which adopt it. I do not disagree with the method—it saves labour and fuel, and improves the quality of the copper, all the gaseous matters escaping through the refinery chimney. In his observations on calcining, it appears to me that he has my letters, but to lay down any particular time, 12 or 24 hours is erroneous, for the degree of heat in the calcining furnace is continually changing, according to the quality of the coal, and other circumstances; it is, therefore, necessary that the ore should always be calcined up to a certain point, whatever may be the time required.—Smelter and Refiner: *Swansea, Aug.* 30.

PURE IRON.

Sir,—In your paper of the 26th August, there is a statement, by Mr. J. Mitchell, which appears to me either very incorrect, when tested by our present general knowledge of chemistry and metallurgy, or else very new and important. The statement alluded to is the author's (Mr. Mitchell, it is presumed) description of a mode of obtaining pure iron by passing, in the first stage of the process, a current of dry hydrogen gas over pure peroxide of iron, at as intense a heat as the glass apparatus made use of would bear. This mode of proceeding is, on principle, entirely at variance with the generally admitted properties of iron—for instance: its power of decomposing water, and thereby being converted into protoxide. In the process Mr. Mitchell alludes to, the hydrogen gas will, there is no doubt, reduce the *per* to the state of *prot*-oxide; but as to its removing the whole of the oxygen, and producing pure iron, in a spongy, or any other state, it is quite a phenomenon in iron metallurgy. Copper, and the superior metals, may certainly be obtained in their metallic state by the due application of hydrogen to their several oxides; but the reason is, clearly, that such metals do not, except under peculiar circumstances, decompose water by the abstraction of its oxygen, as iron, zinc, and manganese are well known to do. If Mr. Mitchell can substantiate his statement, he will open up an entirely new field in iron metallurgy, and we may expect to hear of wonderful results being produced by the application of hydrogen in the smelting process; for my part, however, I have no faith in the doctrine, at least at present. With respect to the second process of Mr. Mitchell—*i. e.*, exposing the spongy iron to an intense heat, in contact with peroxide of iron—it is contrary to all experience to imagine that his spongy iron would remain in the metallic state; for, should the peroxide be in weight equal to twice the weight of the spongy iron (were it possible to obtain such a thing), the whole mass would almost instantly fuse down into the black slag of protoxide of iron. Therefore, if Mr. Mitchell can maintain his statements, he will upset all our generally received notions of iron metallurgy, and the oldest of us must rest content to begin again, *de nova*.

Nantyglo, Sept. 5. S. B. Rogers.

CARBURETTED HYDROGEN—"FIRE-DAMP."

Dear Mr. Editor,—As I have never before personally introduced myself to you, I respectfully announce that my name is "Carburetted Hydrogen," more familiarly known in the district where I was born as "Fire-Damp." I have also other nicknames; but that is nothing to the purpose. I feel myself very much aggrieved, Mr. Editor; and I trust to your candour to state my complaint to the public, through the medium of your valuable columns—my object being, in future, to protect myself, and those who are disposed to approach me rashly, from the danger to which we are subjected. You must know that, for centuries I may say, I have been pent up in crevices in the coal measures, more especially in the north of England. During this long period, this, my mother's womb, has been constantly invaded by man—so that he has had abundant opportunity of studying my character, and making himself familiar with my revengeful temper. Indeed, your pages will bear me out, that of these, my properties, he cannot plead ignorance—that it is perfectly notorious what horror I have of the contact of flame—that it is not only the death of me, but that I uniformly involve in my ruin, Samson-like, those who rashly or wantonly trifle with me by entering my domains with a naked candle—subjecting not only those who thus insult me to suffering from my fiery temper, and the violence of my dying agony, but, what is often worse, the pestiferous vapours, which exude from me after death—prove more fatal than even the first effects of my ire. All this being so well known, I feel called upon to trespass upon you with a few remarks relative to an accident, as it is called, in which I have recently been concerned, in the county of Durham. I had been occupying, for I know not how long, a very confined lodging at East Murton Colliery, in the above county, from which, by some means, I became unexpectedly released; and, meeting immediately with my cousin ("Atmospheric Air"), I embraced her with the greatest delight, and was proceeding with her, in the height of enjoyment, into the regions of light. You may judge of my horror and surprise, when I found my progress suddenly arrested by my mortal enemy—a naked candle! Is it at all surprising that my ire should be kindled at such a moment, or that such an awful catastrophe should ensue? In spite of my violent temper, when excited, I still deeply deplore the many accidents which at various times have been attributed to me; but for which, more properly, the system of working, and that only, is to blame. I assure you, that my real disposition is to act friendly to man; and, when properly treated, I could prove, if it were necessary, that I have administered very materially to his comfort. But in this particular instance, my ignition was what would generally be called purely an accident. The mine was well ventilated, and no particular indication of my presence had before been observed; and you may say, if you please, that it was not to be expected that I should then have made my appearance; but I would ask any—the most experienced—viewer whether he can at all times confidently predict where I am likely to lie concealed? and whether he has not frequently stumbled upon me when least expected? I, therefore, think it is too bad that my birth-place should be invaded, myself subjected to a violent death, and hundreds of men and boys be exposed to perish in my anger—all because men will not adopt the simple expedient of protecting themselves and me by using a safety-lamp. You will not be surprised that I, who am said to be so much implicated in the late accident, should have listened with interest to the evidence and the results of the inquest upon the unfortunate men who perished upon that occasion. My friend, the viewer—of whom I speak with the greatest respect, and have no reason to suppose that he does not possess the greatest talent, and uses his best endeavours to protect me, and all who are employed under him from injury by me—stated (I speak from memory) that he did not recommend men working constantly with lamps—it rendered them careless. Besides, if lamps only were to be employed, some of the most valuable coal seams must necessarily be abandoned, as it would be impossible to get their coal without the use of gunpowder; and where gunpowder is employed, of what use would lamps be? I would answer, of much every way. It does not follow, that because lamps are used in a mine, that, therefore, in a general way, a naked candle *might not* with safety be used, and, consequently, gunpowder might be exploded with impunity; the use of the lamp should be to protect the miner from any danger arising from my sudden and unexpected presence; and it should also be calculated to protect the flame of his lamp from being extinguished by the strong current of air, which I would recommend regularly to be conducted through the works. In such a current as that, it would evidently not be economical to work with candles, on account of the rapidity with which they would be sweated away. The person whom I now employ as my amanuensis, could tell you, that he knows a coal mine where it would be exceedingly dangerous for the men to work without safety-lamps, and yet where the use of gunpowder is constantly going on, in a drift to recover the coal which had been divided by a fault. I would clearly be understood, that where lamps are used, ventilation ought not to be slackened, but rather increased; they would then be an instrument for safely and surely detecting and pointing out to the miner when I was dangerously present; and at such times persons certainly not only ought not to explode gunpowder, but to retire until, by a more efficient ventilation, I had been removed. The objection of greatest weight against the common Davy lamps, is the deficient light which they give out, and their non-protection against strong currents of air; but I have been present with the writer at experiments made by him with a lamp, by which these defects are completely obviated, whereby a light quite equal to a large wax candle is given out. The lamp is completely protected from currents; and the expense of oil is even less than would be the burning of the commonest dip candle, even *when protected* from currents. Of this, you may shortly expect to hear more; in the meantime, I beg to subscribe myself by the name under which I am most acknowledged as the friend to mankind. Coal-Gas.

August 29.

THE EXPLOSION AT EAST MURTON COLLIERY.

Sir,—Mr. T. Deakin has not, I think, read your leading article of the 26th ult., with that attention which should have been given to such a subject as the above, before he had thought of writing the letter which appears in your Journal of the 2d inst. In it, I think, he will find it stated, that "that there are no goafs, or falls of roof, by which reservoirs for the accumulation of gas would be formed." If such is the case, the broken, or pillars, could not have been worked, so that the driftings would be standing in but a very slightly different state to that which would present itself when first driven, so that the explosion must have been brought about by some other cause than that which he assigns. Had the broken been worked, Mr. Deakin's supposition would not, in my opinion, have been very far wide of the mark—in fact, I have no doubt it would have corresponded with the opinions of most of those at all acquainted with the working of a coal mine. That the accident in question was caused by a sudden outburst of carburetted hydrogen, which had been pent up in the pores of the coal, or stone, until released by some unfortunate workman, is quite evident; but how that reservoir has been formed, or in which particular strata, is as yet, and I am afraid will be for some time longer, enveloped in mystery; and let the ventilation be as good as human invention can make it, we shall, at all times, in my opinion, be subject to melancholy accidents of the same description.—A Pitman: *Derby, Sept.* 6.

COAL-PIT SINKING.

Sir,—I have been a constant reader of your valuable Journal for some years, and have carefully perused the papers of Mr. Matthias Dunn on colliery operations; but I have not seen any information how to proceed, when in a dilemma similar to the one in which I am at present placed. We are sinking a pit which is down 14 fms. in quicksand, and we have now, on one side, come upon hard rock, while the other half of the shaft is still in running sand. I am but a young miner, and should thank any practical man, who has experienced a like case, to enlighten me as to the best mode of proceeding; perhaps Mr. Dunn would favour me, through your columns, with his opinion.—J. Williams: *Glasgow, Sept.* 6.

IMPROVEMENTS IN OBTAINING AND APPLYING MOTIVE-POWER.

Sir,—It is a well-known, and, perhaps, extraordinary fact, that the great majority of the patents taken out for mechanical improvements, are found, on examination, to be utterly worthless—of not the slightest benefit to the patentee, or useful to the public; and many of these so-called *inventors*, having obtained their piece of parchment, with one or two pounds of wax in form of a seal, as large as a plate, attached, to make it appear more *weighty*, for which has been paid probably from 150*l.* to 200*l.* (and often times much more), never obtain an opportunity of manufacturing a single specimen for practical purposes—the thing being utterly valueless and impracticable. Now, Sir, it is quite clear that we have scientifically educated engineers, who often get some queer crotchets into their heads, and for which they rush to the Patent-Office, to secure the ideas to themselves; but the great majority of these useless patents emanate from the craniums (I won't say *brains*) of men, who, with a vast conceit of possessing high scientific knowledge, absolutely do not understand the very first principles of mechanical, or any other science; and it does appear to me to be a deep disgrace to us, as an enlightened and scientific nation, that such patents should be granted. It is quite clear that the Patent Laws exist, and are supported—not for securing reward to the ingenious inventor, or the benefit of the public, but merely as affording snug sinecures and profitable births for the connections of the initiated. Were it otherwise, would such a specification as the one connected with a patent, taken out, I believe, by subscription (God help the subscribers!), for one John Weston, headed as above, and part of which is published in your two last Numbers, ever have been permitted to pass the great seal? Why, Mr. Editor, the whole document is a mass of crude, complex, and unapplicable nonsense, and evinces the total ignorance of its author. Beside, worse than that, the two portions which I have seen are absolute, and clearly-seen infringements of other patents. His plan for passing the gases through the water in the boiler, for the purpose of giving up their superabundance of caloric, and thus saving fuel, was patented, some 10 or 12 years since—a full description of which was given in the *Mechanics' Magazine* at the time—on far more true and scientific principles, but, for all that, has never been brought into practice; while Mr. Weston's revolving grate, coal-gas retorts to supply the gas, and afterwards the coke to be tilted on to the grate, with all his complex rigging of "pipes," "valves," and "other arrangements," appear more like the budding ideas of an infant, or the insane ramblings of a disordered adult mind, than the emanations of one matured by scientific study. I now come to his "propelling carriages on railways;" and here, again, his "bank of timber, with pieces of elastic material fixed to the train, and his rollers fixed to the cross sleepers," is a clear infringement of Nickel's patent, taken out about the year 1845; only Weston takes the liberty of reversing the action, by fixing the elastic tubes to the trains, and the rollers to the sleepers; while Nickel fixed the rollers to the front carriage of a train, and laid the tube between the rails—the former adding a vast deal of complex machinery, which would never act, and being obliged to use a locomotive instead of a fixed boiler. In another of his modes of propelling, he takes the same liberty of transposing Clarke and Varley's tube—taking it from its place of rest between the rails, fixing it to the bottom of the train, and setting up pistons at certain distances between the rails for it to pass over; and for passing curves, he has conceived a joint, to render the whole as flexible as the spinal vertebræ of an animal; but how he is to keep life in it, I cannot, for the soul of me, make out. So far there is not a new idea of the least possible utility; and, although I will not attempt to disparage his rotary engine and air-pumps—not yet having seen that portion of his specification—still I have my doubts whether they will not turn out to be equally

original and valuable. I do not know who are the individuals composing the "Patentees' Protection Society," but in this case they have evinced a most extraordinary amount of scientific knowledge, with tact and foresight, and most heartily do I wish them success with their *first bantling*.

Dudley, Sept. 4. ——— STEAM.

TO THE SHAREHOLDERS OF THE BRISTOL AND EXETER RAILWAY.

GENTLEMEN,—Permit me to congratulate you upon the favourable report made by your directors, at your last half-yearly meeting, particularly upon the circumstance of the prompt payment of calls, so that it appears there remains unpaid only about 45,000*l.* due upon every description of shares. Having, from the commencement of your undertaking attempted to promote the profitable success of your line, by an endeavour to check unnecessary expense, in which, I have reason to know, I was successful to an important extent, which, I have also reason to know, was the means of causing me a considerable pecuniary sacrifice, notwithstanding which I still feel an interest in the future progress and prosperity of your line. I observe that your directors are authorised to negociate with the Great Western, or other parties on the subject of leasing your railway, which, judging from the report, ought not to be on less terms than from 5½ to 6 per cent.

In the absence of official information, I think a tolerably accurate estimate of the value of your line may be made, based upon the following items:—It appears, by your last half-yearly report, that the tollage of ¼d. a mile on passengers was 9439*l.*, and tollage on goods, ¼d. per ton per mile, was 3026*l.* Now, as the average charge for passengers is at least 1¾d. per mile, and for goods 2d. per ton per mile, multiplying the former sum by seven, and the latter by eight, gives a sum, for half a year, of 90,281*l.* or at the rate of 180,552*l.* per annum; but as the extra charge for light goods, cattle, parcels, mails, &c., is not mentioned, I think it may be safely inferred, that the gross income of your line is nearly 4500*l.* per week. I will, therefore, presume it equal to about 220,000*l.* per annum; expense of entire working, 45 per cent., will leave a balance of 121,000*l.*; deduct interest on loans, bonds, &c., 53,500*l.*: leaving a balance of 67,500*l.*, to be divided on 15,000 whole shares, which would be 4*l.* 10s. per share, or 5½ per cent. That this estimate is rather under than over the truth, may be inferred by the circumstance of the Great Western Company, on a former occasion, offering to accept a renewal of the lease, *allowing a rent, &c., nearly equal to 6 per cent., which, it may be presumed, they would not have done without expecting a reasonable profit.*

I am, therefore, of opinion that if the line be worked by yourselves, under the management of your able chairman, directors, and officers, it will, at the present, and for some years to come, produce from 5½ to 6 per cent. My private opinion, however, is, that it will be equal to from 6 to 7 per cent., considering that, notwithstanding the commercial panic and consequent distress, the traffic increased the last half-year nearly 24,000 passengers and 5000 tons of goods, producing, at the low tolls, a clear gain of nearly 1000*l.*, arising from a gross amount of about 8000*l.* It is, therefore, reasonable to conclude, that it may continue to increase when trade and commerce improve, and public confidence is restored. I am, however, willing to admit the possibility of some reduction in the revenue, some four or five years' hence, by the opening of the proposed Salisbury and Exeter line; but not to so serious an extent as some people imagine.

Let it be supposed that one-fourth of the present general traffic is direct from Exeter to London; this would be about 30,000*l.*, and that when the said line is opened, one-half of that amount may avail thereof, making a loss of about 15,000*l.* per annum; but as the speed on the broad gauge is higher than on the narrow gauge, and if the charges are the same, I think it probable that the circumstance of Taunton, Bridgwater, Bristol, and Bath being on the line, will still induce at least one-half to continue to use the Bristol and Exeter line, *even if business do not require it*; thus, under the most unfavourable circumstances, it appears to me quite probable that its revenue will warrant a dividend of at least 5 per cent. There are particular circumstances likely to arise, which, in my opinion, may, probably, go a great way towards increasing the present income, perhaps, nearly equal to the supposed possible loss of 15,000*l.*, and, therefore, I am inclined to believe, that by judicious management, which it is likely will be adopted, the dividend will, undoubtedly, range from 5 to 7 per cent. There is also this favouable circumstance attending your line, that with the exception of the contingency of the Salisbury and Exeter line, no further competition can arise, consequently, its present local traffic will remain, and the whole of the northern and Welsh traffic must continue to flow to the west upon it.—THOMAS MOTLEY, C.E.: *Sept.* 5.

STEAM ON COMMON ROADS.

SIR,—It would not have been necessary for me to say more on this subject, if Mr. Motley (in his communication, appearing in the *Mining Journal* of the 12th August) had not placed a construction on my first letter it did not bear. If my meaning was not then precise, I may amend it now, by stating that the *details* desired were not the mere details of the construction of the engine (for this can concern the public at large but little), but of its performance; for, presuming the engine perfect as a piece of mechanism, it does not follow it should be successful in a commercial point of view. The improvements proposed by Sir James Anderson in his new carriage were known to me; it was, therefore, competent for me to form a judgment how far it was likely to fulfil those conditions which I considered and stated as essential to the practical introduction of steam on common roads; and Mr. Motley has not yet shown those difficulties to be overcome. The first and chief one, which is the friction from the road surface, still remains in full force; and it is impossible that Sir James Anderson's, or any other invention (where the driving-wheels are in contact with the level surface), can, within itself, modify this friction. An effort, to overcome the second and third difficulty, has been made by Sir James, in proposing to drive by belts, which enables the cranks, &c., to be independent of the driving-wheels, and, consequently, free from those severe strains which they would otherwise be subject to from the inequalities of the road surface. So far these essential conditions are accomplished, *provided the gutta percha belts do not slip, or become elongated*, where the resistance to motion is materially increased, either from ascending steep inclines, or overcoming the friction, arising from an imperfect road surface—*a result which may be looked for almost with certainty.* My assertion, then, is strictly true, that Sir James Anderson's invention does not overcome the difficulties which I considered were in the way.

Mr. Motley reads my last communication in direct opposition to that which I clearly mean, for he makes me to say, that the friction of the engine is more important to decrease than that arising from the road—whereas, the latter is what I state inventors should endeavour to decrease, and not to create a power to overcome it. It is on this point I consider the excellency of Mr. Wrigg's invention consists, as it accomplishes, *within itself*, that which, at a great outlay, Mr. Motley proposes by wood pavement—the preparation of a road. While on this subject, I should state, my observations on the difficulties overcome by Mr. Wrigg's patent were the results of personal examination; I do not, therefore, think Mr. Motley has been consistent, without assigning any reason, to pronounce upon the efficacy of an invention, of which he cannot possibly have had any opportunity of framing an opinion, so that he appears to have fallen into the very same error of which he improperly accuses me.

The plan proposed, of laying a timber-way, did not escape my attention; but as I am not aware of this forming any part of Sir James Anderson's plans (to which my observations were confined), I did not notice it, for that would, in fact, be dealing with *a road far a carriage*, and not *a carriage for a road*, which is the subject under consideration.

The real object of my reply to Mr. Motley's former communication was, o get an account of the income and expenditure upon any length of average road in England, upon which Sir James Anderson may be supposed to ply his steam-carriage. These are the *details* which I consider necessary the public should have, before they will be convinced there is any chance of success. I need not say this has not yet been given, notwithstanding the display in figures at the end of Mr. Motley's last communication; or to draw conclusions of the profits to arise from an example of that supposed to accrue on the road from Hyde Park to Hounslow, is far, very far, from being fair. We know on this road the traffic is great, the inclines very moderate, and the surface good. If Mr. Motley wishes to make a good impression on the public mind, let time deal with the subject as it is likely to exist, by taking any length of road having reasonable traffic, the average inclinations which are to be met with on our main roads, and the imperfections of surface, which will be met with on this road, show us in *detail* the work the engine will have to perform with a given load, the cost of performing it, not forgetting *wear and tear*, and the income from passengers and other resources. Such a statement, if fairly made in *detail*, will convey to the public mind conviction of the commercial success or failure of Sir James Anderson's plans.

In conclusion, I would request Mr. Motley not to rank me as an opponent to the introduction of steam on common roads; on the contrary, I am a warm advocate of it, when wisely attempted; but I am not an advocate for the introduction of plans that cannot succeed, which I believe to be the case with Sir James Anderson's, because every failure adds to the difficulty of convincing the public, that *any* plan for introducing steam on common roads can succeed, so great is the prejudice against it.

London, August 20. ROBERT WEEKES, C.E.

COMPRESSED-AIR LOCOMOTION ON COMMON ROADS.—Another exhibition of the capabilities of the locomotive engine of Baron Von Rathen, worked by compressed-air, took place on Thursday week, on the road between Putney and Wandsworth. This trial, which was the third, was for testing the apparatus for working the air expansively, which, however, was unfortunately, leaky, and much of the power was lost; but for which accident, attributable to the absence of the regular workmen from the College manufactory, a much greater speed would have been attained. As it was, however, the carriage, weighing 3 tons, and carrying from 25 to 30 persons, started in good style, and kept pace with former experiments, as to time and distance; the motion was very regular, and the machinery stood well—the only casualty being the above leakage. The patentee considers he has now completely solved the problem of the practicability of employing compressed-air in locomotion, and regulating it as to distance, speed, load, nature of road, &c.—on which, with the greater or less perfection in the construction of the machinery, its success, of course, depends. He is prepared to show to mathematical demonstration, that he can embody sufficient power in this model air-carriage to carry 4½ tons, including carriage, 10 miles in one hour on common roads, or a train of 45 tons in the same time the same distance on a railroad; but, if carried out on a large scale on the latter, he contends that the system would effect a saving of 75 per cent. over the steam locomotive. These trials with heavy loads are of much interest, and worthy of encouragement, as the first efforts of a new system; and we shall feel much pleasure in continuing to report their progress.

CUNNINGHAM AND CARTER'S NEW SYSTEM OF PROPULSION ON RAILWAYS.—It is much to be regretted that, from bad mechanical arrangement in the only plan yet tried on a working scale, the adoption of a system of railway propulsion by atmospheric pressure, has received another severe shock in the proposed abandonment of the principle on the South Devon line, and its supersedence by the locomotive engine. Notwithstanding these untoward events, we believe the time is fast approaching when a rallying point will be found, and the practical part of the subject be received with much more favour by the public than ever. We have always most distinctly stated our decided objections, founded on scientific information, and close observation, to the longitudinal valve, convinced that it could never be made to act with certainty and regularity, and was totally unfit for a line of greater length than a mile or two; this opinion has been fully borne out by the results on the Croydon and the South Devon lines. Of the principle adopted by Messrs. Cunningham and Carter we have always spoken highly favourable; the entire absence of leakage, not an atom more vacuum destroyed than there is corresponding power obtained, and the delicacy with which the regulation of that power can be carried on, renders this principle, in our humble opinion, one of certainty, economic action, speed, and safety, when carried into practice. After many months' delay, we are now happy to inform our readers, that the proprietors have succeeded in obtaining a very eligible situation, most centrically situated in the metropolis, for the exhibition of two large models—one in a direct line, 160 ft. long; and the other in a circle, 15 ft. in diameter—each having a double line of rails, on which trains will uninterruptedly run in both directions—showing the powers and capabilities of the system, the facility with which the trains are backed, and the speed regulated, performing every movement which can be effected by the locomotive; but under far greater control. The working of these models will convince the public of the superiority of this over the valve system, and which we trust will lead to its introduction on some branch line, for proof of its capabilities on a still larger scale. We fully expect it will be in operation by Monday week; after which we shall again return to the subject.

MACHINE FOR CUTTING THE TEETH OF FILES AND RASPS.—A patent has been secured by Mr. G. Winslow, late of Burton-crescent, for improvements in machinery for manufacturing files and rasps. It consists in a peculiar arrangement of suitably-formed chisels, acting by great pressure on the file, or rasp blank, instead of effecting the operation by a series of blows, as has hitherto been the mode. It would be quite impossible to give any idea of the machinery without complex diagrams. Suffice it to say, the operation always commences at its smaller end; from this end the file usually increases in thickness towards the middle, from whence to the shank it is generally of a uniform thickness; and the uniform pressure, under these circumstances, necessary to produce a number of equal cuts, has hitherto operated against the success of file-cutting machinery. In the present instance, the specification is most elaborately drawn up, and the machine appears well calculated to effect the object in view.

BRASS LETTERS ON GLASS.—According to the specification of Mr. J. L. Lamenaude, who has secured a patent for cements, for affixing brass letters on panes of glass, which have a very showy appearance, the following are his recipes:—1. 15 parts of copal varnish, 5 parts of drying oil, 3 of oil of turpentine, 2 of essence of turpentine, 5 of animal glue, dissolved in a water bath, and 10 parts hydrate of lime.—2. 15 parts of sandrach and galipot resin varnish, 5 of drying oil, 5 of oil and essence of turpentine mixed; these are first mixed, and then 10 parts of Spanish white and dry white lead, are added.—3. 15 parts of copal varnish and gum lac mixed, 5 parts of drying oil, 3 parts of a solution of caoutchouc, or gutta percha, 7 parts of oil tar, and 10 parts of Roman cement and plaster of Paris, in powder, mixed.—4. 15 parts of copal varnish and colophane resin, 5 of oil and essence of turpentine, 2 parts isinglass in powder, 3 parts iron filings, or blacksmith's cinders, ground and sifted, and 10 parts of washed earth, ochre, or rotten stone.

THE PREVENTION OF RAILWAY ACCIDENTS.—A correspondent suggests the following plan for the prevention of accidents upon railroads:—If a dial-plate (to show by day and night), with hour and minute hands, without the going part, were to be placed at each station, simply for the purpose of indicating the time that the preceding train had passed, it would inform the engine-driver and guard when caution was necessary. For instance, suppose the dial-plate was fixed at 20 minutes past one, and the engine-driver and guard's watches were then half-past one, they would know that they were within 10 minutes of the preceding train, and so on. A person at the station should alter the hands as each train passes. Had this plan been adopted, the late accident on the Lancaster and Preston line, and perhaps other accidents, might have been prevented.

COAL MARKET, LONDON.

PRICE OF COALS PER TON AT THE CLOSE OF THE MARKET.

MONDAY.—Bate's West Hartley 14 6—Buddle's West Hartley 15—Chester Main 14 3—Davison's West Hartley 15—Dean's Primrose 13 6—Adair's Main 13—Hedley's Hartley 12 9—Hasting's Hartley 15—Holywell Main 14 6—Newcastle Hartley 13 6—New Tanfield 13 3—North Percy Hartley 14 6—Ord's Redheugh 12 6—Tanfield Moor 14—Townley 13 9—West Hartley 16 6—Wall's End Bewicke and Co. 15 9—Benson's 15 9—Framwellgate 15 9—Hedley 15 6—Killingworth 15 6—Eden Main 16 3—Lambton Primrose 16 3—Belmont 16 3—Haswell 17 9—Jonassohns 15—Keepier 16 9—Lumley 15 6—Stewart's 17 3—Heugh Hall 15 9—Thornley 16 3—Adelaide Tees 16—Denison 15 9—Tees 17—West Cornforth 15 6—West Hartley Netherton 15—Kenniel Parrot 22—Parson's Graigola 21—Sidney's Hartley 15—Caradoc 16 6.—Ships at market, 211; sold, 80

WEDNESDAY.—Bate's West Hartley 14 9—Buddle's West Hartley 15 3—Chester Main 14 3—Hedley's Hartley 12 6—Holywell Main 14 6—North Percy Hartley 14 9—Ord's Redheugh 12—Tanfield Moor 14—Tanfield Moor Bute's 13 3—Townley 14—West Hartley 16 6—Wall's End Benson 15 3—Gosforth 15 3—Harton 15—Hotspur 14 9—Killingworth 15 3—Northumberland 14 9—Percy Bensham 14 9—Eden Main 16 3—Lambton Primrose 16 3—Bell 16—Hetton 17 6—Haswell 17 9—Lambton 17—Morrison 15 3—Russell's Hetton 17—Shotton 16 3—Stewart's 17 3—Whitwell 15 3—Castle Eden 16—South Hartlepool 16 3—Adelaide Tees 16 3—Denison 15 6—South Durham 15 3—Tees 17—West Cornforth 15 6—Derwentwater Hartley 14 9—Hartley 14 9—Parson's Graigola 21—Snapethorpe 15.—Ships at market, 212; sold, 78.

FRIDAY.—Bate's West Hartley 14 9—Chester Main 14—Doan's Primrose 13—Hasting's Hartley 15—Holywell Main 14 6—Newcastle Hartley 13 6—New Tanfield 13 3—North Percy Hartley 14 9—Original Tanfield 11 9—Ord's Redheugh 12 6—Tanfield Moor 14—Tanfield Moor Bute's 13—Wylam 14—Wall's End Bell and Brown 15 3—Bewicke & Co. 15 3—Brown's 14—Benson's 15—Elm Park 15—Gosforth 15 3—Killingworth 15—Walker 14 6—Washington 14 9—Eden Main 16—Belmont 16—Bell 16—East Hetton 15 3—Hetton 17 6—Lambton 17—Lumley 15—Russell's Hetton 17—Shotton 16 3—Whitwell 15 6—Caradoc 16 6—Hartlepool 17 6—Hudson's Hartlepool 15 6—Thornley 16—Adelaide Tees 16 3—Cowndon Tees 15 6—Seymour Tees 15 9—South Durham 15 3—Tees 17—Morgan's Stone Coal 25 6—Parson's Graigolo 21.—Ships at market, 146; sold, 79.

EXPORTATION OF THE PRECIOUS METALS.—The following are the official returns of the exports of gold and silver from the port of London for the last week:—Silver bars to Hamburgh, 90,500 ounces; ditto to Rotterdam, 40,000; ditto to Belgium, 6060—Silver coin to Rotterdam, 170,000; ditto to Hamburgh, 7138; ditto to Belgium, 6000—Gold coin to Calais, 610 ounces.

NEW PATENTS.

E. Chrees, Homerton Cast'e, Homerton, for improvements in manufacturing sealing-wax.

G. Nasmyth, Ebury-street, Pimlico, Middlesex, C.E., for certain improvements in the construction of fire-proof flooring and roofing, which improvements are also applicable to the construction of viaducts, aqueducts, and culverts.

W. Wheldon, engineer to Messrs. J. Warner and Son, Jewin Crescent, brass-founders and engineers, for improvements in pumps or machinery for raising or forcing fluids.

J. L. Ricardo, Lowndes-square, Middlesex, Esq., M.P. for improvements in electric telegraphs, and in apparatus connected therewith.

W. E. Hollands, Regent's Quadrant, Middlesex, dentist, and N. W. Green, Waltonplace, Chelsea, gentleman, for a new manufacture of artificial fuel in blocks or lumps.

W. Losh, Newcastle-upon-Tyne, for improvements in steam-engines.

H. Smith, Vulcan Works, West Bromwich, for improvements in the manufacture of railway wheels.

DESIGNS FOR ARTICLES OF UTILITY REGISTERED.

I. Rider, Bedminster, Bristol, bib cock.
A. Lewis, Fenchurch-st., protective machine for cleansing, painting, and glazing sashes.
Messrs. Wilson, Wardour-street, Soho, artists' sketch-book.
A. P. Dudley, Birmingham, trouser strap.
I. and W. A. Blair, Irongate, Glasgow, compass hats.
W. English and Son, Brighton and Lewes, cutlers and surgical instrument makers, Dr. Manden's uterine douche bath.
J. C. de Witte, Threadneedle-street, penholder.
F. C. Rein, Strand, the lavatuba, or breast reliever.
Winfield and Simms, New Bond-street, music-stand or easel.
J. Gilbert. Craven-buildings, Drury-lane, and C. and W. Lancaster, New Bond-street, embossing press.
J. Guise, Margaret-street, Wilmington-square, gas burner and apparatus.
J. H. Cutler, Birmingham, an eye (hook and eye).
Deane, Dray, and Deane, King William street, stove.
Lane and Barkentine, Upper Seymour-street, Euston-square, safety buckle.
C. and W. Lancaster, New Bond-street, tumbler for a gun-lock.
R. W. Winfield, Birmingham, letter balance.
J. Kimberley, Birmingham, cramp.
F. Perroncel and D. G. Wertheimber, West-street, Finsbury, artificial teeth.
W. F. White, Brinton, Norfolk, farmer, stock protector.
Hubert and Vargus, Margaret-street, Cavendish-square, rivet button.—*Mechanics' Mag.*

PATENT HYDRO-CARBON GAS.—The ADVANTAGES of this GAS are as follows:—It does not require any purification—the cost is much less than any ordinary gas—the apparatus necessary for its production not half the price—is perfectly free from sulphuric acid, sulphurous acid gas, ammonia, &c.—it gives a most brilliant light, not injuring the health of the inmates, nor destroying the goods in the house where it is made and consumed. It may BE SEEN in FULL OPERATION at the ROYAL POLYTECHNIC INSTITUTION, REGENT-STREET, where its properties are explained by Professor Ryan. 39

Parties requiring this cheap and beautiful Gas for Lighting Towns, Factories, Railway Stations, Dwelling-houses, &c., may obtain every information, and licenses for the same, by application to Mr. George Fowler, at the Hydro-Carbon Gas Offices, No. 9, Lincoln's Inn-fields, London.

RIDER'S RAILWAY BRIDGE.—TO RAILWAY COMPANIES.—A PROSPECTUS of the above newly-invented IRON TRUSS RAILWAY BRIDGE will be FORWARDED, and CONTRACTS entered into, or LICENSES GRANTED for its ERECTION, on application to Mr. Moulton, Bradford, Wilts. 40

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